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THE
INDUSTRY'S
FIRST
NEWS
MAGAZINE

Non-Skeds Heard Again

IN THEIR fight for survival the large irregular (non-scheduled) carriers have been given another hearing in the national capital, this time before the Senate Select Small Business Committee. It is possible that the so-called "death edict" of the CAB, which prompted the new hearing might be postponed

or even eased a bit temporarily, but there was nothing in the new testimony that hasn't been thrashed out numerous times before.

Although there are 55 large irregulars reporting to CAB, the bulk of the business today is controlled by no more than a dozen outfits, some of which have done quite well financially.

Just how large and important is the non-sked industry? In terms of passengers carried the non-skeds doubled their business in 1950 over 1949 and now rank after National Airlines in volume, or 11th in domestic industry rank. They carried 447,110 passengers in 1950 as against 17,154,862 for the domestic trunk and local service lines.

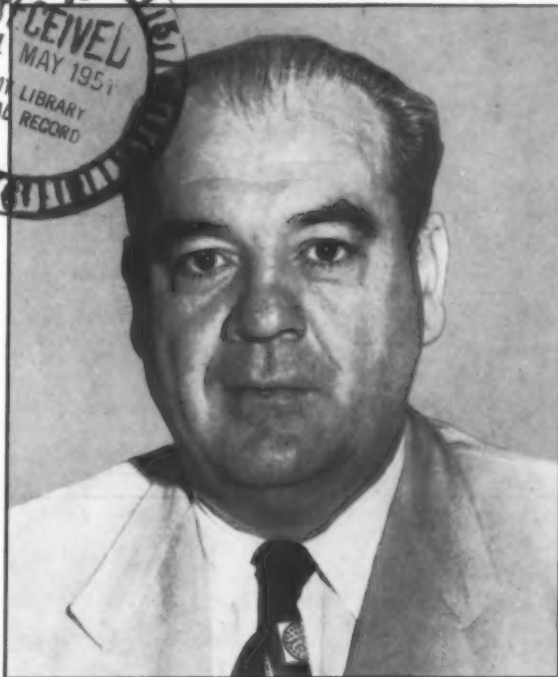
But in terms of revenue passenger-miles the non-skeds rank fifth in the domestic industry, just after American, United, TWA and Eastern. They performed 761 million passenger-miles as against 8,000 million by the total domestic industry.

The relatively high ranking in passenger-miles and lower ranking in passengers carried is evidence in itself that the non-skeds have concentrated on long-haul service. The average scheduled airline passenger in 1950 traveled 461 miles. The average passenger in the non-sked group traveled 1702 miles.

This is one of the focal points on which CAB and the scheduled industry have rested their arguments—that the non-sked "skims the cream" by operating in the high-density long-haul markets. Any airline man knows that a 1700-mile average haul is cash business. It's the long-haul passenger who makes possible the airline service to over 500 smaller and less profitable stops throughout the country.

In his testimony before the Senate committee CAB Chairman Del Rentzel pointed out, as others have before him, that the non-skeds need not fly full they have full loads, that non-skeds are not required to provide costly dispatching systems or communications systems, and that most of them are leasing their equipment from the armed services for as low as \$300 a month.

In their favor, the non-skeds can point to a (Please Turn to Page 6)



1952 E-M Conference Head

R. L. (Doc) Anderson, director of research and development for Chicago & Southern Air Lines, has been elected chairman for the 1952 Engineering and Maintenance Conference of the Air Transport Association. Anderson, who joined C&S in 1934, has been in aviation since 1930. Prior to his current assignment, he served as superintendent of maintenance and later as superintendent of engineering with C&S. (See Page 27).

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a LOOK at the WEEK

Government aviation officials feel manufacturers and airlines should put a couple of good men on leave to work in government agencies such as NPA and DPA. Feeling is they'd have less materials and priorities trouble if competent men were on the job. Other forms of transport have spotted their men in strategic places.

Government's new ceiling prices on manufactured items, effective May 28, won't have too much effect on aviation industry. Military and defense orders are exempt, and transports are custom-built to airline requirements, so there's no fixed price on a specific airliner. Aircraft parts, however, are under price lid.

Defense Production Administration didn't plan to have civil aviation represented on its important requirements committee because industry was "too small." Now, however, DPA has been persuaded otherwise—there'll be representation through Undersecretary of Commerce Del Rentzel's Office.

Revised traffic figures show U. S. domestic airlines established all-time passenger safety record last year with fatality rate of 1.1 per 100 million passenger-miles. Earlier figures had indicated 1.2, equal to 1939 and 1946 records.

There's strong possibility that Big Four future mail rate may be set at 45c per ton-mile instead of 42c interim rate in CAB's recent show cause order. (News Issue, May 7). Reason: 45c can probably be agreed upon and put into effect fairly rapidly without extensive litigation.

International air transport study which Harvard Business School is making under contract with Commerce Dept. won't be as broad as originally planned. It'll deal with mobilization and defense aspects, won't be overall look at U. S. policy.

Observers think Senate Small Business Committee will favor some relaxation of CAB's regulation limiting non-skeds to three trips monthly between any two points.

Despite mobilization, Air Force has given okay for several manufacturing plants to shut down for vacation period. Principal reason is that it's cheaper to have all vacations in a plant at once than to pay overtime for fill-in workers.

Airlines on CMP "B" List, Lightplanes Out

Personal aircraft and airline transports stand to fare poorly under Controlled Materials Plan.

Manufacturers are hopping mad because:

- **Personal planes aren't included in CMP**, which becomes effective July 1. This means manufacturers can't build them unless they can get materials without priority assistance.

- **Airline planes are on the CMP "B" list** issued by National Production Authority, instead of being in with military planes on the "A" list.

The "B" listing means that a manufacturer with a transport order for Air Force will receive materials allocations through Aircraft Production Resources Agency at Wright-Patterson AFB. On an airline order he will go through National Production Authority's aircraft division for materials—even though AF and airline planes may be on same assembly line.

Effects of this will be:

- **Lower Priority:** Some "B" list items may be shunted aside in tight materials situation.

- **Slowdown:** Materials trouble on a civil transport could slow down military planes on same assembly line.

- **Confusion:** Getting allotments from two different places, APRA and NPA, will cause confusion and trouble. Also, NPA's aircraft division doesn't have nearly enough competent people to figure requirements, lead times, etc.

Situation was puzzling because there were reliable reports last week that top Requirements Committee of Defense Production Administration had indicated it would okay production of 2,500 personal planes yearly and had also approved future airline plane requirements. Furthermore, APRA was agreeable to handling personal plane and airline allotments along with military planes to keep them all in one place. CAA had already assigned a man to APRA to help with civil end of the program.

NPA's "B" list ignored Air Coordinating Committee recommendations which included production of 2,500 personal planes yearly and equal status for airline and military transports (now produced under same DO rating).

Manufacturers and government aviation officials are working to see if they can improve the situation. Meanwhile, NPA is being accused of empire-building, bungling and failing to carry out intent of its policy-making body, DPA.

Navy Buying 80 Transports

About 80 four-engined transport planes are to be bought by Navy under special appropriation in 1952 budget.

Budget provides \$214,920,677 for 95 new planes for "air transportation of personnel, cargo and mail and for administrative use." It is learned that 12-15 of these will be Fairchild Packets for Marine use. Rest will be Lockheed Super Constellations and Douglas DC-6A's in undisclosed proportions, although there is a possibility that some Boeing Stratofreighters may be included.

Navy will use planes both as contribution to Military Air Transport Service and for Fleet Logistic Air Wings.

CAB Favors Atlantic Coach Service

Year-round Atlantic tourist service should be established immediately, and regular fare should be raised \$20, Civil Aeronautics Board states.

It made its views known to the U. S. international airlines prior to the opening of the International Air Transport Association traffic conference meeting in Bermuda last week. Pan American World Airways favors tourist service, TWA has opposed it.

Here's CAB's proposal for a two-class fare structure:

Regular Service: New York-London fare raised \$20 to \$395 one-way, \$711 round-trip, with comparable increases to other gateways. Sleeper surcharge would be \$50 single, \$75 double; Sleeperette, \$14 or more. All special fares would be eliminated.

Tourist: Year-round minimum fare \$225 one-way, \$405 round-trip to London, to be adopted for 1951 on-season.

CAB-proposed limitations on tourist service are:

Effective seating densities of planes (seats actually available for sale over critical segment) as follows: Stratocruiser, 100; DC-6 or Constellation, 65; DC-4, 60. If densities are decreased, fares should be increased proportionately.

Tourist seats should be limited to one-fifth number of scheduled seats available during corresponding months of 1950, the American Overseas allocation to be split equally between PAA and TWA, with minimum allocation of one round-trip weekly to each participating IATA line.

No meals unless charged for, no extra sections, minimum passenger service.

If the two-class fare structure isn't adopted, CAB favors the following year-round set-up:

Standard Fare: \$395 one-way, \$711 round-trip, with Sleeper and Sleeperette charged as mentioned above.

Off-Season: Shortened to November-March, with 30-day rate one and one-half normal one-way fare.

Other CAB recommendations:

Atlantic Cargo: 10% rate increase; willing to approve 34¢ per ton-mile rate for general commodity shipments of 1,000 lbs. or more.

Atlantic Charters: Favors adoption of IATA resolution fixing minimums, slightly higher than present rates, probably not less than \$1.75 per mile for DC-4 with full passenger load, or \$1.50 ferry; DC-6 or Constellation, \$2.40 and \$2.00; Stratocruiser, \$3.50 and \$3.00.

Mid-Atlantic: Raising fares "to a point which will eliminate absorption requirements on competitive routings via North Atlantic."

Pacific: Favors increase on Australasian routes because of emergency, ineffective sea service and higher costs. However, favors keeping present levels to Asiatic points where sea competition is more effective.

Connolly Heads Air Mobilization Set-Up

Gen. Donald H. Connolly, director of Baltimore's aviation department and one-time CAA Administrator, has been named special assistant to Undersecretary of Commerce, D. W. Rentzel to work on civil aviation mobilization. The Baltimore airport board said he would serve for a period of not more than 90 days.

Connolly will be in charge of implementing the reports of the various civil aviation mobilization task groups which have been at work for several months. The reports were completed only recently. He will direct the activities of three divisions in Rentzel's office: Air Transport Division, General Aviation Operations Division, and Airports and Airways Division.

MANUFACTURERS

CMP Regulations: Controlled Materials Plan Regulations 1 and 3, establishing basic pattern for operation of CMP, have been issued by National Production Authority. Regulation 1 defines "rights and obligations" under CMP, how production schedules will be authorized, how controlled materials will be allotted, and how manufacturers submit information for their third quarter, 1951. Regulation 3 establishes relative preference status

of delivery orders for controlled and other materials. Standard reporting and application forms are being mailed to known producers and will be available in all NPA field offices. NPA has scheduled following meetings in 20 cities to explain CMP to businessmen: May 15, Detroit, Chicago; May 16, Minneapolis, Philadelphia, Houston; May 17, Seattle, Boston, Dallas; May 18, Portland, Denver, New York, New Orleans; May 21, San Francisco, Kansas City, Cleveland, Atlanta; May 22, Los Angeles, St. Louis, Pittsburgh; May 23, Richmond, Va.

Lockheed Developments: Lockheed Aircraft Corp. has (1) received production order for new single-seat version of F-94 jet fighter, the F-94D, which will be tactical fighter designed for long-range ground support, (2) received orders for large additional quantities of Air Force T-33 and Navy TO-2 two-place jet trainers; production will be increased to fastest rate and largest numbers for any Lockheed plane since P-38, (3) announced that 1951 sales will be about \$200 million, (4) reported that new AF and Navy orders for Super Constellation will extend production almost to end of 1953.

Ford to Build J-40: Lincoln-Mercury Division of Ford Motor Co. has received mobilization contract to build 7,500-lb. thrust Westinghouse J-40 jet engine under Navy contract. New plant will be built at undisclosed site and 5,000 workers will be required for full production. Ford, which had previously received Air Force contract to build Pratt & Whitney R-4360 engines, has also been awarded AF contract for production of fuel injection system for Wright R-3350 piston engines.

New DC-6B Order: Douglas Aircraft Co. has received order for three DC-6B's from Compagnie de Transports Aeriens Intercontinentaux. Order gives Douglas total of 103 commercial DC-6B's sold.

Cessnas Ordered: New Air Force order has been received by Cessna Aircraft Co. for "several" LC-126 liaison planes, military version of 190. Company has increased production in order to be able to deliver 33% more of the 190 models for commercial use in last half of 1951.

Fairchild Plant: New \$2 million plant at Bay Shore, L. I., N. Y., will be built by Stratos Division of Fairchild Engine and Airplane Corp. for manufacture of aircraft refrigeration and pressurization units, and other accessories.

Jonco Aircraft Formed: Jonco Aircraft Corp. has been formed with headquarters at Shawnee, Okla., airport. Company, organized by 25 men formerly with other aviation firms, expects to produce accessories and equipment for planes and airports as well as aluminum and glass fiber non-aviation items. **Halbert C. Johnson**, president, owns plumbing company in Chula Vista, Calif., and will remain in California. In charge of concern as vice president-general manager is **Merle F. Palmer**, former general superintendent of Fairchild Aircraft Division.

People: Paul Moore elected executive vice president and general manager of Lear Inc. . . . **Charles A. Wolf** named sales manager of Eclipse-Pioneer Division of Bendix Aviation Corp. . . . **Murray S. Gelber**, vice president and secretary of The Garrett Corp., appointed vice president and manager of AiResearch Manufacturing Co. of Arizona.

PLANES & EQUIPMENT

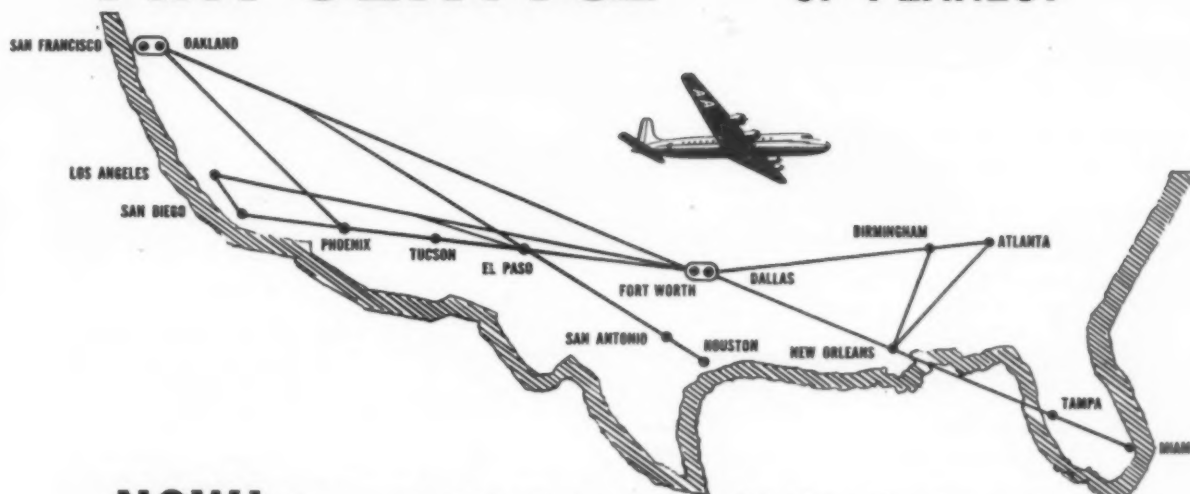
Allison Dropped: Air Force has canceled large-scale production plans for Allison J-35-A-23 9,000-lb. thrust jet engine and there are no production plans for it at present. Reason is change of plans regarding Boeing B-47 jet bomber. Originally B-47B, current six-engined production model powered by General Electric J-47's, was scheduled to go out of production soon and be re-

(Continued opposite page 70)

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THE INDUSTRY'S FIRST NEWS MAGAZINE

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AMERICAN AVIATION



Why Helicopter Pilots May Soon Have Four "Hands"

The unique construction of the helicopter not only makes it mighty useful in peace and war, it also creates a unique set of stability factors. Pilots need special training and ability which is considerably different from their fixed-wing experience.

But helicopters may soon acquire a new reputation for ease of control — thanks to Honeywell's continuing research on aeronautical control problems. At the request of the Air Materiel Command, and working closely with Goodyear Aircraft Corp.,

Honeywell engineers have successfully adapted the Honeywell Autopilot to the helicopter's special needs.

Experienced pilots say the result is "amazing" — that it's *as good as having four hands*.

That's just one of many aircraft control problems now being researched and solved by Honeywell engineers. We expect to solve many more in the years to come — because *automatic control* is such an important part of aviation progress. And *automatic control* is Honeywell's business.

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EDITORIAL

CONTINUED FROM PAGE ONE

greatly improved safety record during 1950, and the near-capacity business being carried by the scheduled carriers. It is obvious that for the present, anyway, the non-skeds are not taking away much, if any, business from the major carriers. If currently high traffic demands break, or the new equipment coming into service within the next year lowers load factors, that will be a different story.

One argument brought forth again in the Senate hearing is wearing a little thin. This is the "new market" developed by the non-skeds. It is no more of a "new market" than if new Ford cars were put on the market at \$1,000 cash complete with all the gadgets. The new cars would be snapped up fast. If all airlines reduced fares to one cent a mile the business would be spectacular. But price must be related to cost. If the transcontinental scheduled carriers abandoned all local services and concentrated on the long-haul, and waited for each plane to fill up before departing, and eliminated communications, dispatching and all of the other things that go to make up air transportation, they could meet the non-sked prices, too. But we wouldn't have an integrated nation-wide air transport system serving 565 airports as we have today.

It is universally agreed that the goal of all air transport must be to reduce fares whenever operating costs permit. Airline fares today are far cheaper than they were five or ten years ago when related to other inflationary price levels. The scheduled carriers have, in effect, reduced fares substantially in the past decade.

Some non-skeds have found profitable fields of endeavor which they have pioneered themselves. Riddle Aviation, for example, pioneered air cargo between Puerto Rico and the U. S., developed new markets, and has now been given a certificate. We have always felt that Seaboard and Western, and Transocean, both in the international business, deserved encouragement from the CAB because they were pioneering new fields and competed only indirectly, actually, with scheduled international carriers. Both have high standards of operation. But too many of the non-skeds have grabbed for the easy money with little intention of responsibility as carriers contributing their fair share of the burdens of maintaining air transport in the long-range public interest.

Not only that, but some of the non-skeds have given all air transportation a black eye by fraudulent advertising and failure to live up to claims. Not long ago one large non-sked went bankrupt leaving a lot of people (and paid customers) holding the bag. Tens of thousands of passengers have been guaranteed DC-4 flights only to find themselves packed into C-47's or C-46's. One of the worst abuses of responsibility is the difficulty passengers have in getting refunds on unused tickets or portions of tickets.

There have been some on the fringes of the aviation industry—those with an apparently psychopathic delight in needling the scheduled airlines as "big entrenched interests feeding at the public trough"—who have envisioned great new horizons

opened up by the non-skeds simply because they were selling air transportation at a low rate. But the benefits of cut-rates can be largely offset by lack of responsibility toward the patrons.

The non-skeds have tried hard again for a hearing of their problems. For a while it looked as though the hearing would blossom out into charges of "influence" and there were reports of "private eyes" digging up material to use against the CAB and the scheduled industry. But the Senate committee put such ideas to rest. The non-skeds have had their day in court. But the basic issues remain the same.

Much Too Slow

SEVERAL months ago we criticized the Department of State for holding up export licenses for engines and parts destined to foreign airlines flying U. S. equipment. There has been but slight improvement in the situation since then. Hundreds of export licenses for vitally needed parts and supplies are being held up for months on end by government personnel who have virtually no understanding at all of the normal requirements of airlines. There's no legitimate excuse for the delays.

Is Your Slip Showing?

THE YEAR 1946 was notable in airline history as the year of the big confusion. Traffic was terrific and the lines weren't yet organized to handle the expanded business efficiently. Since January of this year traffic has soared beyond all expectations. The unexpected demand has caught some of the companies unprepared. Passengers are beginning to squawk again. Oversold airplanes, mixed up reservations, confirming of space—all the 1946 complaints are being heard again. Let's hope the airlines can keep apace of traffic and solve the passenger problem as rapidly as possible. It's time for trouble-shooting.

Bouquets

PAN AMERICAN World Airways has published a handbook called "New Horizons" advertised for \$1 as "13,501 facts about what to see, do, wear, and take home from over 900 places on 6 continents." It is an exceptionally good job filling an important need in travel information for the air passenger. PAA is to be commended highly on the preparation and fulfillment. The data are laudably accurate.

Delta Air Lines brought out a book some months ago describing the wonders of Miami with all manner of tips on where to go, what to see, what to buy and where to stay. It, too, was an excellent job filling an important need. Airlines are becoming much more wide-awake about the travel market. This market consists of something more than just trying to fill seats.

WAYNE W. PARRISH

AMERICAN AVIATION

MISSIONS ... and *MIRACLES!*



U.S. Marines Watch In Awe As Big Bridge Floats Down

World's First Air Dropped Bridge Spans Carried By 119's To Chosin Reservoir Battle

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The world's first air drop of a
bridge was made today by aircraft
of the FEAF's Combat Cargo
Command, was eight spans total-
ing 16 tons were parachuted near
Kotori-Ri in North Korea.

United States Marines, fighting
bitterly against hordes of Chinese
Communist Troops in the frozen
north, gazed up in awe as the
huge C-119 "Flying Boxcars" of
the 314th Combat Cargo Wing
broke through an overcast and
spilled out the huge pieces of
equipment. Large 100 foot para-
chutes supported the spans as they
drifted slowly down, landing near
the determined leathernecks.

Mission successful, pilots re-
turning to this lift base, stat-

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B.F. Goodrich



New brake block saves weight, improves braking, lasts longer

A NEW KIND of brake block has been developed by B. F. Goodrich. It is now in use in the BFG Expander Tube brakes on the planes above—the Douglas C-124, North American's B-45, Boeing's B-47 and Convair's B-36.

Secret of the new brake block: there are *no rivets*. Instead, the brake lining is cemented onto a special magnesium shoe with a new, super-strong B. F. Goodrich cement.

Elimination of the rivets makes it possible to use more of the brake lining. You get full, positive braking down

almost to the metal backing!

The magnesium backing also makes the brake block more rigid, providing full, even contact between lining and drum for better braking. The shoe is perforated for better dissipation of heat.

This construction is both lighter and stronger than the rivet type.

Besides the new brake block, the new-design B. F. Goodrich brake on these planes also has a narrow-cavity expander tube that gives greater braking pressure with less fluid. And a new spider-type frame that provides extra strength with less weight.

The basic BFG expander tube design offers still other advantages. Less weight for a given amount of kinetic energy than any other brake. Ability to take emergency overloads better. No locking or grabbing. Quicker, easier maintenance. Longer life. For help with your brake problems call on B. F. Goodrich engineering skill. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

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FIRST IN RUBBER

AMERICAN AVIATION

HOW MOBILIZATION HITS AIRPORTS



By KEITH SAUNDERS

AIRPORT executives and operators are greatly concerned over the effects of near-mobilization and all-out mobilization on their airports.

Ever since the Korean action developed into a tough war, airport people have wanted to know:

- What is the place of the civil airport in the so-called "gray" period of partial mobilization for the national defense?
- How well prepared are our airports for what lies ahead?
- What should operators of civil airports do about security?
- What is the outlook with regard to the fixed-base operator, the corporation aircraft owner and the personal plane owner?
- How will airports make out under joint civil-military use agreements?
- What about priorities for maintenance, repair and operating supplies for civil airports?
- How much Federal-aid money is going to be available and under what conditions?

To find answers to these questions, airport executives and managers from all over the country went last month to the two big annual airport meetings: the Airport Operators Council conference at Memphis, and the American Association of Airport Executives' annual business meeting in Minneapolis.

In some instances their questions were answered, doubts resolved,

while in others the answers were equivocal and apprehensions intensified.

Here are some of the more significant problems discussed at the two conventions:

Q: What does a 100-group Air Force mean to civil airports?

A: Col. Harold R. Maddux, Assistant for Air Bases, Office of Deputy Chief of Staff-Operations, USAF, told the AAAE it will mean the taking over of a few civil airports in toto, and the joint usage of a good many airports by civil and military users.

The Air Force and Navy have sent survey parties to a number of airports and will inspect still more, he said, but only a small percentage of the total number surveyed are liable to be taken over unless a global war develops. Maddux pointed out that 100 groups is still a long way off and that much of the survey work being done is merely precautionary.

Q: How much longer will Federal-aid funds for airports be available, and in what amounts?

A: Phillips Moore, director, Office of Airports, CAA, told the AAAE that the next budget (fiscal 1952) is expected to provide at least \$20,000,000 for the Federal Airport Program (about the same as the current budget), which will mean a somewhat restricted Federal-aid program.

Moore said national emergency made it mandatory that CAA spend this money only for the construction or improvement of airports important

to the national defense, which would not necessarily preclude smaller fields but would certainly mean that most of the available money would be expended on airports that would:

- (1) be useful to the military in a time of emergency;
- (2) be useful to civilian air transport in time of peace, and
- (3) be located in populous areas where they would be useful in the reserve training program.

He said the program would allow for no "frills" and that some cities might have to defer indefinitely the new airport terminal buildings they need. Funds will be easier to obtain for such improvements as runway lengthening and strengthening, high-intensity runway lighting, taxiways and parking aprons.

Q: What's the outlook for priorities for materials for airport work?

A: By George R. Gaillard, director, Office of Aviation Defense Requirements, CAA, at the AAAE meeting.

"As claimant agency before the National Production Authority for materials needed for the maintenance, repair and operation of civil airports, we have to date handled 150 claims of the "spot assistance type," with only six turn-downs, most of the latter being slightly unreasonable. This type of claim must come through the CAA regional office, not directly to Washington, and must supply us with the information needed.

As to the other form of assistance, an overall planned program, Gaillard said CAA is now engaged in prepar-

ing plans which entail the identification of a network of airports considered to be essential to the transportation and industrial life of the country, and that "once this program has been established and recognized by the Defense authorities, it will be a relatively simple matter to obtain such priority assistance as may be necessary to maintain the airports there listed, as well as to make certain necessary improvements."

He said it is too early to determine what effect the Controlled Materials Plan, to become effective July 1, will have, but the effect may be "marked."

Q: How will the civil airports fit into the mobilization program?

A: Phillips Moore told the AAAE that joint use is necessary, since the nation cannot afford to maintain two complete and distinct systems of airports, one for military use only and one for civil use only. The problem, he said, is to effect a division of usage that will afford maximum development of utilization by the military with minimum disruption of civil aviation activities. In other words, there must be a common system of airports. CAA will encourage and assist in the keeping open of all non-private airports but will have to slant most of its aid toward those in the Common System during the emergency period.

Q: Who decides what civil airports the military will use on a joint basis, and who sets the terms and conditions for such use?

A: By Col. Maddux, Phillips Moore, and others. The Department of Defense makes the decision, through the Munitions Board, acting after consultation with the Air Coordinating Committee, the CAA and the civil operators affected. When conflicts arise as to terms and conditions of such usage, the Airport Use Panel of the ACC explores the situation and makes recommendations which are generally accepted.

Under terms of the Federal Airport Act, military aircraft are entitled to free use of the landing area of a Federally-aided airport to the extent of 25% of the total civil and military use of such airport, and for use of the landing area in excess of such amount or for use of buildings and other facilities, the military is required to negotiate with the airport management for a lease agreement.

However, under the provisions of Public Law 289, relating to the disposal of surplus airport properties and facilities by the government, the military is required to pay only when there is "substantial use," and that's where the rub comes in.

Q: What is substantial use?

A: When Jack Bolton, manager of Port Columbus (O.) threw this question at the Airport Use Panel during the AAAE meeting, he touched off a lively discussion, upshot of which was an admission that the Use Panel has no formula as to what constitutes substantial use.

However, Bob Froman, CAB representative on the panel, pointed out that since its organization last February the panel has been kept busy "putting out fires" at points where complex situations have developed, as at Wichita, Kansas, at Lake Charles, La., and at Minneapolis/St. Paul, and has not really had time to sit down and work out definite policies and formulas.

Q: How is the Common System for Air Navigation and Traffic Control going to affect airports?

A: Charles F. Horne, Civil Aeronautics Administrator, told the Airport Operators Council that we already are "well on the way" toward completion of the Transition Program for a Common System, and that such navigation and landing aids as have already been installed have greatly increased the traffic acceptance rates of many terminal-type airports.

"Our traffic control problems . . . do not lie entirely in the air," he said. "Airports themselves must keep in step with the electronics developments if we are to accommodate the ever increasing volume of air traffic in a manner which will make air travel ever more safe and dependable. We shall have to bring out a most intimate relationship among our airplanes, our electronic equipments, and the design and construction of our airports." He recommended:

- **Improvement of airport design**, with particular attention to those features affecting the rate of flow of traffic in and out of the airport, such as runway layout, taxiway layout, loading positions and terminal facilities.

- **Provisions of adequate means** for navigation on the surface of the airport in minimum operational weather conditions, chiefly through visual runway and taxiway markings.

- **Use of airport surface detection radar** to assist in the control of the movement of aircraft and vehicles on the landing area.

Q: How much longer can airport managers count on the business of personal plane owners, operators of business or corporation type aircraft, and fixed-base operators?

A: Military members of the Airport Use Panel suggested that curtailment of flight training and other activities of fixed-base operators might become necessary at jointly used airports, and hinted that it might even become desirable to move such operators to smaller fields.

This drew sharp protests from airport managers, who pointed out that the military was being inconsistent in urging the maintenance of a large number of civil airports as being essential to the national defense and the civilian defense, and at the same time suggesting a policy that would force perhaps 50% of the airports to the wall.

At AOC Meeting—Government and industry leaders attending the recent Airport Operators Council meeting in Memphis listen intently as A. B. Curry, (standing) president of the council and chairman of the Airport Use Panel of the Air Coordinating Committee,

talks about airport problems in a time of mobilization. Seated, left to right, are: Charles F. Horne, Civil Aeronautics Administrator; Phillips Moore, director, Office of Airports, CAA; Wayne W. Parrish, editor and publisher, American Aviation Publications, and Leslie W. Arnold, vice pres., Eastern Air Lines.



Northwest Airlines Set for Comeback Climb

By W. W. P.

NORTHWEST Airlines hopes it has hit bottom and is on the way up again.

As the sixth or seventh airline to go through a critical period of reorganization and adjustment since the war, it believes it has seen the worst and expects to climb out of its most recent crisis without change of top management or control.

Within the past several years it has experienced two groundings of its fleet of Martin transports, it has experienced tremendous cost and headaches with its fleet of ten Boeing 377 Stratocruisers (chiefly with engines and accessories), it has had a bad accident record over the past two years, and it has had to reorganize its operating and maintenance departments under close supervision and direction of the CAA.

Here are thumb-nail glimpses of the "come-back" program:

• **Reorganization.** Croil Hunter, president, has retained a firm hold on his board of directors and remains as president although he has let it be known that he wants to become chairman of the board in due time when the company's health is better. Malcolm S. Mackay, a commercial pilot, former colonel in charge of a Marine transport unit in the Pacific, and a special partner of the Wall Street firm of Laidlaw & Co., is moving in as executive vice president.

Amos Culbert, v.p.-sales, joined the



Malcolm S. Mackay
NWA Executive V.P.

apparently has a firm hand over operations and maintenance. He is well respected in the company and in CAA circles, seems to be the man to fill the job. Both Culbert and Don King, regional v.p. for the Orient, had been talked about as executive vice presidents, but the NWA board decided otherwise. It is not taken for granted that reorganization of personnel has stopped—there will probably be other changes in due time.

• **Martin Fleet.** NWA had 25 Martin 2-0-2's and has lost five in accidents. The remaining fleet of 20 is in the process of being sold. Only two are disposed of at this writing. NWA still thinks the Martin is the best twin-engined airplane available. CAA has made it clear that it thinks the Martin is very much okay. Quite a few top domestic airline executives

like the Martin over the Convair. But NWA has decided in view of its record with Martins not to put any back into service.

This has been a blow to the Martin company, which has taken a heavy rap on a good airplane, since only one of the NWA accidents is directly attributable to structural failure and that failure was corrected in the first grounding. It was NWA's traveling public that has made the decision to sell the fleet.

• **Fleet Plans.** NWA will operate a four-engined fleet exclusively, 22 DC-4's and 10 Boeing Stratocruisers, but is withdrawing its advertising that it is the only domestic airline operating a four-engined fleet exclusively. Industry reaction on that slogan was fast and sharp. NWA is looking for three or four more DC-4's. It can serve its system okay with the larger equipment although a few local stops will be admittedly unprofitable.

• **Mergers, Etc.** NWA has had quite a few propositions from other airlines to merge, purchase or to effect interchanges. One proposal in particular involving three other airlines had a lot of admitted merit. But NWA, being somewhat on the defensive during the current crisis, merely listens to proposals and shelves any serious discussions until after it gets higher up the economic scale. It feels it is in a poor trading position now. So for the time being there are no negotiations of any kind under way. Any rumors about the sale or exchange of any routes are to be discounted entirely.

• **Financial.** Despite the heavy reverses and high operating costs of the Stratocruisers in the past few years, the NWA financial picture is not critical. Bank loans were re-

For details on NWA's sales staff reorganization, turn to page 41.

company about a year ago and has completely reorganized traffic and sales. Frank Judd, a NWA veteran,



Glider to Jet—Chase Aircraft Co. has made a successful first flight of its XC-123A jet-powered troop and cargo transport. The XC-123A is a modification of Chase's CG-20 glider. The engines are General Electric J-47's.

duced last year from \$21,000,000 to \$16,000,000. The company is in better cash position today than it was a year ago. If 20 Martins can be sold for the asking price of \$350,000 each, plus spares, the cash will come in handy. The Martins have been depreciated to \$200,000 each, which gives a good margin for profit.

NWA has proved in the past that it can "come back" very quickly from a reversal. Given any sort of break now, it ought to come back okay. It isn't in a healthy position but it isn't as badly off as some other airlines were a few years ago.

• **Clean-Up.** It is no secret that CAA and CAB, especially the former, gave an ultimatum to NWA to clean up its operations and maintenance. One top government official stuck his neck out a mile by over-ruling inspectors and permitting NWA to reorganize on its own, under close CAA supervision. Drastic action was considered some months ago. The million-dollar pilot training program was to be completed May 10, thus releasing one DC-4 and one Stratocruiser for passenger service. NWA personnel "down the line" have cooperated 100% with CAA.

Everything is running more smoothly now. The temporary operating limitations imposed by CAA are due to be lifted entirely this month.

• **Utilization.** The Boeings are picking up utilization almost weekly now. Line checks have been reduced from 48 hours to 24. Cylinder changes are one-tenth of the peak last October. NWA hopes to achieve as high as 9 hours a day utilization by summer, but will be satisfied with 8. This represents a terrific increase in earning capacity. The DC-4 presents no problems, with utilization on the air lift at about 15 hours, and domestic service geared for 10 hours by summer.

• **Personnel.** NWA has begun to tighten up its organization and total personnel dropped from 5,404 in March to 4,900 a month later. This probably can be reduced further. It isn't yet clear whether NWA has as tight a control over personnel work loads as other airlines have achieved since the war. Biggest cuts have been in traffic and sales. Operations and maintenance come next. NWA hasn't been as tough in cutting system-wide in all departments as some other lines were forced to do since the war, but in any event there has been some progress.

• **Outlook.** Given any break at all, NWA should make money during the five mid-year months. It is geared to turn a profit with a good traffic break. Whether the good months will offset the bad ones remains to be seen but the outlook is not too bad, everything considered.

Since the war TWA, Capital and

Western have survived very critical times and have "come back" under new managements. National survived a severe crisis with the same management and control. Northwest is expected to do the same. Chicago & Southern and Northeast both had organization troubles but got their outfits back on the beam and have done well. Had the NWA crisis come at a time of lean industry-wide traffic, it would be undergoing tough times. But airline traffic is good and high load factors will pull out NWA rapidly.

• **Equipment.** NWA has purchased one DC-4 recently and this is costing \$415,000 ready for service on the line May 15. It is leasing three DC-4's from Transocean Air Lines, at an undisclosed figure, and two of these planes will be available for service this month and the third July 1. DC-4's are difficult to find at any price. NWA had hoped earlier that the market would relax but the contrary has been true. One advantage to NWA is that most of the DC-4's it owns have been written off or 'way down.

• **Boeings vs. Connies.** One reason for NWA's current optimism is the pulling power of the Stratocruisers. It points out that for the 12 months ending last Sept. 30, Constellations were costing \$1.07 a mile to operate and the Boeing \$1.72. But the Boeing was only averaging 5 hours and 40 minutes service per day. At 8 hours utilization NWA estimates the Boeing will operate at \$1.52.

The Boeing has 72 seats available compared to the Constellation's average of 54.6. At an 80% load factor on each airplane, NWA figures it has a 78c differential in revenue which would give it a clear 35c a mile better profit break per mile than operators of Connies.

As the only domestic operator of Boeings, NWA has had to do a lot of figuring to answer critics who believe it should be operating Connies or DC-6's. But there is no doubt than at an 80% load factor, and utilization of 8 hours a day and better, the Boeing can be a real revenue producer. It has undisputed popularity with passengers. It isn't too hard to figure out that if the current traffic boom continues, NWA will make up a lot of lost time between now and next winter.

• **Publicity.** NWA may require a longer time to sell all of its Martins than it had anticipated. *Time* magazine ran an article a few weeks ago that, while true in all essentials, was so written as to scare off some foreign buyers who were practically on the dotted line. One Far East order for five vanished into thin air two days after *Time* reached the foreign capital involved. It has disposed of two Martins through an exchange basis with DC-4's, and there are some good sales pending.

Aviation Calendar

May 14-16—Aero Medical Assn. 22nd annual meeting, Hotel Shirley Savoy, Denver.

May 15-19—Air Force Northeastern Air Procurement District clinic, Boston Army.

May 15-15th Nat'l Air Carnival, Birmingham.

May 19-20—Nat'l Pilots air meet and races, Chattanooga, Mun. Airport, Tenn.

May 21-24—Society of Aeronautical Weight Engineers tenth annual conference, Hotel Jefferson, St. Louis, Mo.

May 23-24—American Society for Quality Control 5th annual convention, Hotel Cleveland, Cleveland, Ohio.

May 23-25—Institute of Radio Engineers Technical Conference on airborne electronics, Biltmore Hotel, Dayton, Ohio.

May 24-25—Society of the Plastics Industry annual national meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

May 26—Maintenance and Operation annual clinic, Municipal Airport, Reading, Pa.

May 28-29—ATS annual membership meeting, Mayflower Hotel, Washington.

June 3-6—NAA annual convention, LaSalle Hotel, Chicago.

June 3-8—SAE Summer Meeting, French Lick Springs Hotel, French Lick, Ind.

June 13—ASME semi-annual meeting of aviation division, Toronto.

June 13-16—AWA Annual Convention, Hotel Commodore, New York, N. Y.

June 18-22—American Society for Testing Materials annual meeting, Atlantic City.

June 27-28—I.A.S. annual summer meeting, Western Hqs. Bldg., Los Angeles.

June 28-30—Inst. of Nav. annual meeting, Hotel New Yorker and Kings Point, N. Y.

July 4-12—EASC 18th Nat'l Soaring Contest, Harris Hill.

July 20-22—CAP Nat'l Drill Competition, D. C. area.

Aug. 15-19-99's 5th annual All Woman Transcontinental Air Race, Santa Ana, Calif. to Detroit, Mich.

Sept. 10-14—Instrument Society of America 6th Nat'l Instrument Conference and Exhibit, Sam Houston Coliseum, Houston, Texas.

International

May 8—IATA Traffic Conferences 1, 2 and 3, Bermuda.

June 5-5th Session, Int'l Civil Aviation Organization, Montreal.

June 15-July 1—Paris Int'l Aircraft Exhibition 1951, Grand Palais and Paris airport.

June 23—British Nat'l Air Races 1951, Hatfield Aerodrome, Hertfordshire, Eng.

June 26—ICAO 3rd Eur. Med. Regional Meeting, location undetermined.

Aug. —Int'l Telecom. Union Extraordinary Admin. Radio Conf., Geneva.

Sept. 3-14—Third Int'l Conf., convened jointly by the Royal Aero. Soc. and the Inst. of the Aero. Sciences of America, Brighton, Sussex, Eng.

Sept. 4—ICAO Search & Rescue Div. meeting, Montreal.

Sept. 10—IATA 7th Ann. General Meeting, London.

Sept. 25—Int'l Civil Aviation Org., SAR Div. 3rd Session, Montreal.

Helicopter Operating Costs Dropping Sharply

... Military Types Promise Local--Service Economies

DIRECT operating costs of commercial transport versions of helicopters now in military production will range from 41 cents to \$1.09 a ton-mile in metropolitan area service and from 33 cents to about \$1 in local service operation.

These cost figures compare to the \$2.03 ton-mile cost for the Sikorsky S-51 and the \$3.93 cost of the Bell 47, the two helicopters now in commercial service. The comparison points up the fact that the cost of helicopter service will go way down when current production or in-development helicopters are available for commercial use.

These observations were made by Richard K. Waldo of the Program Planning Staff of the Civil Aeronautics Administration, who also served as chairman of the Helicopter Working Group of the Air Coordinating Committee, which recently completed a rotary-wing study. Waldo addressed the economics session of the American Helicopter Society's annual forum, held in Washington, D. C., April 26-27, outlining briefly the contents of the ACC report, which will be issued publicly soon.

Nine Types Studied

The ACC working group studied the commercial potentialities of nine helicopter types ranging in capacity from seven to 70 passengers, four of which are in production under military contracts and the remaining five in various stages of development.

For metropolitan service, cost estimates were based on a 15-mile block distance and an annual utilization of



TWO PILOTS of the Piasecki HUP-1 Navy helicopter demonstrate the planes autopilot performance in this "hands off" photo. The HUP flew from Piasecki's plant in Morton, Pa., to Anacostia Naval Air Station, D.C., entirely on automatic controls in conjunction with the annual meeting of the American Helicopter Society in Washington.

2,000 hours (5.5 hours daily). On this basis, one model now in production (Waldo did not identify the models for competitive reasons) could operate for between 54 and 58 cents a ton-mile. Two other production models were rated at \$1.01-\$1.07 and \$1.03-\$1.09 respectively.

A model under development, but not yet in production, was rated at 41-43 cents a ton-mile, while a second development model was listed at 43-46 cents.

Waldo offered an interesting comparison between the helicopter and the fixed-wing plane in local service operations. For local service, the basis for estimates was a 65-mile block distance and an annual utilization of 2,750 hours (7.5 hours daily). Production model helicopters in this category had direct operating costs ranging from 48 cents to \$1 a ton-mile, while development helicopters ranged from 33 to 39 cents.

This compares with direct operat-

Commercial Versions of Military Transport Helicopters¹

Manufacturer	Commercial Model	Military Designation	Main Rotors	Engines	Normal Gross Weight (lbs)	Maximum Passenger Capacity ²	Cruising Speed (mph)	Military Status ³
Bell	48A	YH-12	1	1	6,513	8	86	P
	D-128	XHSL	2	NA	NA	NA	NA	D
Hughes	205	H-17	1	2	59,000	70	116	D
Piasecki		HUP-1	2	1	5,450	7	100	P
	PD-22	H-21	2	1	11,500	15	120	P
	PV-15	XH-16	2	2	NA	NA	NA	D
Sikorsky	S-55	H-19, HO4S	1	1	7,300	8	86	P

For Comparison: Helicopters Used in Present Metropolitan Area Services

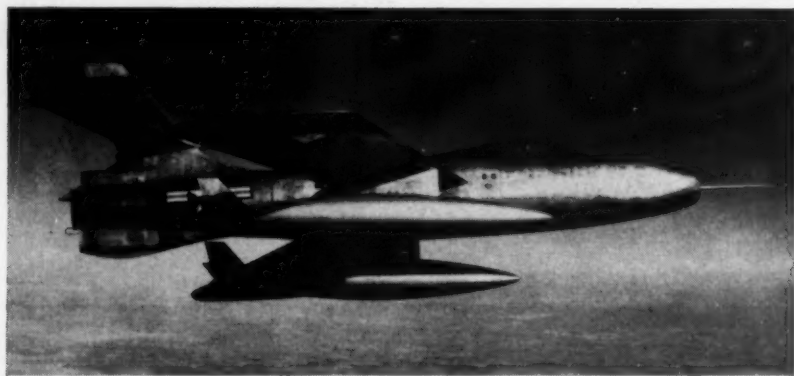
Bell	47	.....	1	1	2,200	1	85	.....
Sikorsky	S-51	.....	1	1	5,500	3	85	.....

¹Excluding commercial versions of McDonnell and Sikorsky assault transports, for which development contracts have recently been awarded and on which details are still classified.

²Without provision for "streetcar-type" seats.

³P—in production; D—under development.

NA—Not Available.



XF-91 Tanks—Republic Aviation Corp. has added large, 20-foot external fuel tanks to its XF-91 interceptor fighter now undergoing flight test at Edwards AFB, Muroc, Calif. The tanks hold "more than 500 gallons."

ing costs of 22 cents a ton-mile (ATA formula) for fixed-wing local service aircraft like the Douglas DC-3. (Actually, local service operators experienced direct operating costs of only 18.5 cents per ton-mile during 1950.)

Thus, Waldo points out, the most economical transport helicopter expected to be available in the foreseeable future will have operating costs 50 per cent higher than those of competitive fixed-wing aircraft. But this needs qualification. If it can be assumed, as seems reasonable, that the ground and indirect operating costs of the helicopter on local service lines will roughly equal those of fixed-wing aircraft, the overall cost disadvantage of the helicopter would be reduced to 25%.

Further, the estimated direct operating costs for the helicopter appear to be subject to substantial reductions with advances in the art. Finally, if any comparison is to be made as to competitive fares, the overall cost to the passenger must be considered.

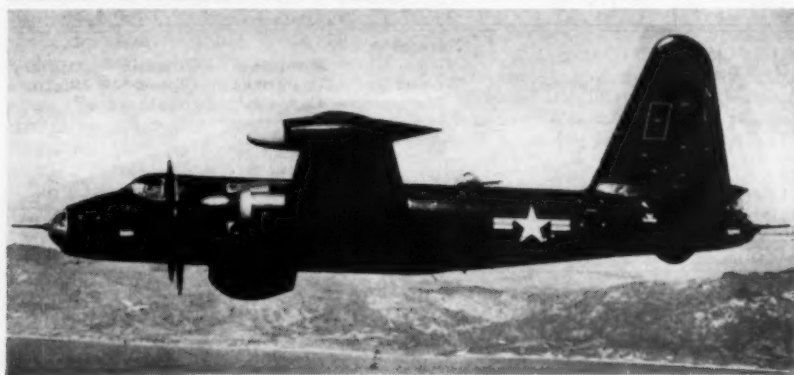
Fixed-wing aircraft must operate from airports which are usually a good distance from town, while helicopters will be capable of operating

into mid-town or close-in heliports with little or no ground transport cost and time involved. Thus, to get an accurate comparison, the passenger's fare and time of ground transportation involved in getting to the fixed-wing local service plane must be added to his airline fare and time.

This considerably reduces, and possibly nullifies, the advantage of the fixed-wing plane over the helicopter. Waldo thinks that commercial versions of multi-engined helicopters now under military development will provide an excellent equipment potential for local service airlines and short-haul routes of the trunk lines.

Helicopter Speedier

Waldo's group made an analysis of the helicopter versus the fixed-wing plane for eight typical short-haul route segments, using an assumed cruising speed of 115 miles per hour for the helicopter, which appeared reasonable in the light of current military development work. The analysis indicated a downtown-to-downtown speed advantage of 2- or 3-to-1 in favor of the helicopter for journeys ranging from 45 to 130 miles.



Newest P2V—The latest version of the Navy's No. 1 sub-hunter, the Lockheed P2V-5. Chief external differences between the -5 and earlier models are the nose turret and the larger wing tip tanks, which are center mounted at the end of the wing rather than underslung (not shown in this particular airplane). The -5 also carries considerably more radar and electronic equipment than its predecessors.

At the same time, a cost analysis indicated that surface transport fare at both ends of the fixed-wing trip represented a sizable proportion of the airline fare. By operating downtown-to-downtown and charging a slightly higher fare per mile, the helicopter can absorb the ground fare cost without increasing the out-of-pocket fare to the passenger.

Because of the 2- or 3-to-1 time advantage over the plane and its downtown-to-downtown operations, the helicopter would tend to be more competitive with auto, train and bus transportation, and therefore would contribute toward developing a greater market for air travel.

Higher Loads Likely

Logically, it would follow that the helicopter would operate at higher load factors than fixed-wing, short-haul aircraft, and this would tend to counterbalance its higher initial direct operating costs. Waldo's study showed that about 88% of intercity bus passengers travel less than 100 miles per trip and about 98% of passenger auto trips outside of city limits are less than 100 miles in length.

The average length of haul in rail coaches (excluding commutation traffic) is 94 miles. In sharp contrast, only 5.7% of airline passengers in a selected month traveled 100 miles or less. The transport helicopter, Waldo feels, could change this picture substantially.

Although there is considerable new emphasis on development of convertible aircraft, Waldo is unenthusiastic about their early potential for commercial service. Within the next five to 10 years at least, Waldo states, helicopter configurations appear to offer more commercial promise than convertiplanes or autogiros.

The economics session at which Waldo spoke wound up the two-day meeting of the AHS. The first day consisted of a morning session on helicopter theory and design and an afternoon session on development and test work. In the evening AHS held its annual Honors Night Banquet.

On the second day the morning session was a symposium on military and commercial operations and the economics session was held in the afternoon. The meeting concluded with the Pioneers' Night Dinner. A two-day air show including demonstrations by 15 types of military helicopters was held in conjunction with the AHS meeting.

Officers elected by AHS to serve for the coming year included: Bartam Kelley, Bell Aircraft Corp., president; D. D. Viner, Sikorsky Aircraft Division, T. R. Pierpoint, Piasecki Helicopter Corp., Clarence M. Belinn, Los Angeles Airways, C. R. Wood, McDonnell Aircraft Corp., and R. Allen Price, Parsons Industries (blade manufacturers), vice presidents.



SUBMARINES BEWARE!

A fast lens catches a GRUMMAN GUARDIAN in mid-air close-up. Two versions of this carrier-based plane work together to protect ships of the U. S. Navy from submarine attack. Some GUARDIANS carry powerful detection devices. When these "hunters" locate an undersea enemy, bomb-carrying GUARDIANS, like the one shown here, come in for the "kill."

GRUMMAN AIRCRAFT ENGINEERING CORPORATION, BETHPAGE, LONG ISLAND, NEW YORK
Contractors to the Armed Forces

London Letter

By Richard G. Worcester



THREE separate sources of published information now provide a complete picture of the scope and plans of Fairey Aviation Co. for a new and improved type of military and commercial rotorplane.

The first report of the Interdepartmental Helicopter Committee mentions that the new project is called the rotordyne and is powered by two propeller-turbine engines. It is to carry 23 passengers and have cruising speed of 135 mph. The Ministry of Supply has authorized company to proceed with preliminary development. Air is tapped from the main turbines to the rotor tips where separate reaction units can be used for emergency and during take-off and landings.

Fairey officials have revealed that a contract for this project had been received and there was mention of the fact that it has also military significance. D. L. Hollis Williams, chief engineer, made the point that a large load-carrying all weather helicopter could solve a number of anti-submarine warfare problems in much simpler fashion than was possible with a fixed wing type. The Rotordyne aircraft, it was implied, could operate from a merchant ship thus removing the necessity for an escort carrier.

de Havilland has given no information about the series 2 Comet with Rolls-Royce Avon jets. The greater weight of the four Avons will, however, mean another 1,000 lbs., and to achieve an increase in range of 20% would mean adding about 1,300 gallons of fuel more than the present Comets which, together, would result in a gross weight of about 10,000 lbs. more than the 105,000 lbs. for the Ghost-Comets. Unless de Havilland is contemplating a really large increase in gross weight, therefore, it is unlikely that the new Comets will carry very much more payload.

The greater range however brings within its reach a number of new routes.

It is quite clear the Comet is one of the few viceless transports; the question is simply one of economics which cannot really be answered without trial.

Another argument which is being heard about jet transports runs something like this—what does it matter if you cannot break even with the jet transport, it is obviously the next step and we might as well use it now. But governments all over the world are tightening up and looking to the national airlines to keep reducing their deficits.

The Chief of the Air Staff of the RAF has made the point that the cost of the modern jet bomber is about as much as a destroyer used to be, and for that reason there would never be, in peacetime, great fleets of such aircraft. He also mentioned that jet bombers with the power of retaliation are the best defense in the end.

With the massive concentration in Britain on jet fighters for defending the British Isles his words are timely. Nevertheless the British public is evidently quite satisfied that "fighters-before-bombers" was the only possible policy at the end of the war. It came as a disappointment, however, that even the first objective of full re-equipping with modern fighters has taken so long—partly because Britain was exporting many fighters for commercial recovery and partly because of the high cost of the aircraft, plus the rise in the cost of living. Mr. Bevan's resignation from the Government shows how crucial is the dual policy of balancing exports with defense.

Much could still be done by the Ministry of Supply to turn over the production potential of those factories which cannot meet this stiff requirement to the designs of others that can. These are times when ruthless actions are essential if Britain is to produce aircraft which will pay their way in civil or military operation.

Prices of used DC-3's in Britain go up almost every day. Now they are fetching nearly \$60,000 each which is \$15,000 more than only three months ago. The expansion of the non-skeds, as a result of the proposed scheme for carrying military personnel by charter aircraft, has sent operators looking into every possible source of supply of surplus transports.

PEOPLE IN THE NEWS

George Prill has resigned as assistant secretary, technical committee, of the International Air Transport Association, to join the air carrier division of CAB's Bureau of Safety Regulation.

William J. McBrien, vice president of the Caterpillar Tractor Co., East Peoria, has been appointed a vice chairman of the Dept. of Defense Munitions Board, in charge of procurement and supply activities.

Charles T. Roggi, in addition to being director of the Public Affairs Department of the Air Transport Association, has assumed the title of assistant to the president.

Robert A. McMillan, Washington attorney and accountant, has joined the staff of the Aircraft Industries Association as an assistant to George F. Hannaum, director of the Industry Service. He succeeds R. W. Markey, Jr., now with the Ford Motor Co.

Philip A. Hollar, former special assistant to the Administrator of Defense Transportation and prior to that a vice president of the American Car and Foundry Co., is now Deputy Undersecretary of Commerce for Transportation, second in control under Delos W. Rentzel.

M. Crabbe has retired as administrative director of aeronautics for Belgium. He at one time was administrator of SABENA Belgian Airlines.

Dr. Robert F. Bacher, former member of the Atomic Energy Commission, has been appointed as chairman of the Committee on Atomic Energy in the Department of Defense Research and Development Board.

AAP Expands Editorial, Advertising Staffs

Robert M. Loebelson, news editor of the Technical Data Digest published for Army-Navy-Air Force by Central Air Documents Office at Wright-Patterson, AFB, Dayton, O., has joined the editorial staff of AMERICAN AVIATION Publications. He has been assigned to the manufacturing field, with emphasis on new technical developments with planes and related equipment.



McGregor

Bruce L. McGregor, who has been with Bendix Aviation Corp. for 16 years, has been appointed regional advertising manager for AAP, effective June 1.

McGregor will handle advertising sales for AMERICAN AVIATION magazine, American Aviation Worldwide Directory, and the Official Airline Guide, with his offices at 139 N. Clark Street, Chicago.

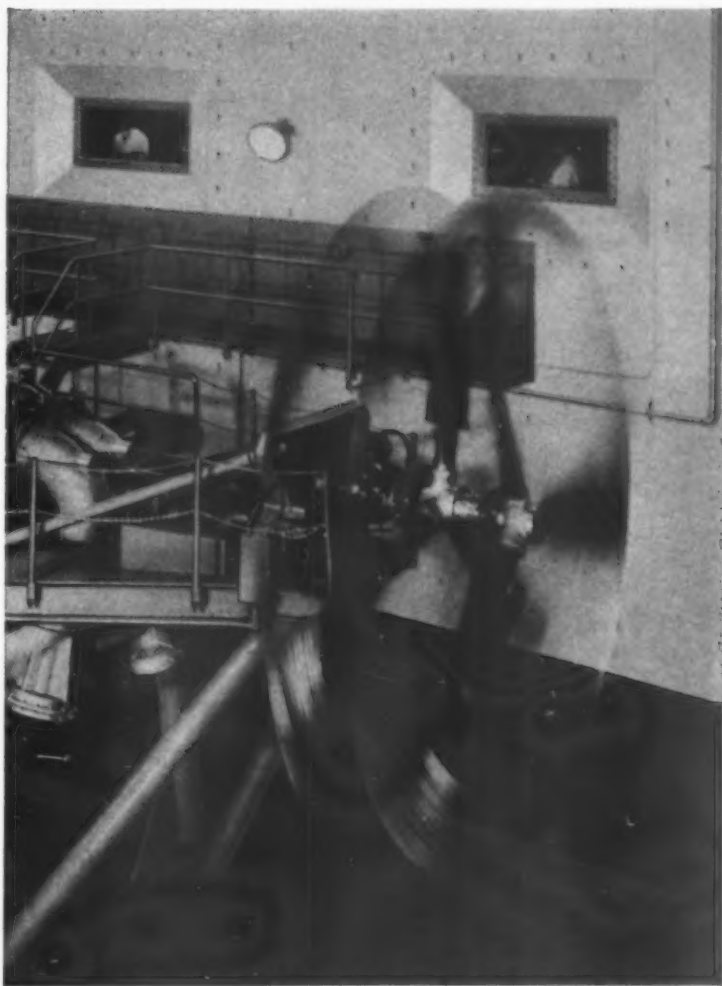
*First to harness
dynamic turboprop
power!*

Aeroprop

A new day has dawned
in the history of flight—
the day of turboprop power!

For the dynamic combination
of turboprop engines and Aeroprops
opens up a great and new era
when cargo ships, bombers and fighters
will fly at near- or super-sonic speeds.

*And they'll fly with range and performance
that until now have been only a dream—
a dream brought to life
on the drawing boards
of the men at Aeroproducts.*

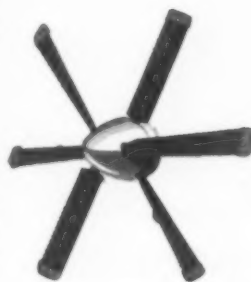


Aeroproducts Propeller installed on Allison T-40 Turboprop

Aeroproducts, working in close contact with the Navy and Air Force, has pioneered propeller design for turboprop power... has, by its research and never-ending experimental work, blazed the trail of propeller driven supersonic speed for all others to follow.



December, 1945—a dramatic milestone in the development of turboprop power! For it was then that the Convair F-81 was flown, first Air Force fighter using turboprop power. And from these tests came knowledge for the development of Aeroprops for new planes that utilize the full power, the enormous thrust of the turboprop engine and Aeroprop combination—and set wonderful new standards of aircraft performance.



AEROPRODUCTS DIVISION
GENERAL MOTORS CORPORATION
DAYTON, OHIO



*Building for today
Designing for tomorrow*



Aeroproducts



"Guardian Angel"—Somewhere in Korea a Sikorsky helicopter from the Air Rescue Service prepares to pick up a wounded G. I. carried by litter bearers. On another occasion, forty-seven seriously wounded paratroopers were rescued from behind enemy lines in two days alone by these "guardian angels". In the Korean campaign to date, Sikorsky helicopters have safely evacuated over 1,600 United Nations

personnel, many of whom were so seriously wounded that they might not have survived a much slower and rougher overland journey.

This is another of the many military uses that have been found for these rugged Sikorsky helicopters. The versatile performance of this dependable craft points to an even greater military potential, as well as countless civilian uses.

SIKORSKY AIRCRAFT

BRIDGEPORT, CONNECTICUT

ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

• 'Big' Budget Jump Thins Out Under Scrutiny; Peak Expansion Year Deferred

By James J. Haggerty, Jr.



BEFORE the President submitted his 1952 military budget to Congress last week, there had been considerable uneasiness among aircraft manufacturers, who thought they had noticed a trend toward slowing down the mobilization program.

But the hullabaloo about the BIG \$60 billion budget the President came up with tended to allay their fears somewhat. The press pointed out that this was considerably more than the 1951 budget, so therefore it must logically follow that the mobilization program was being speeded up rather than slowed down.

However, if one takes a good close look at this budget, he might find a flaw in that logic. He might find that, while the mobilization program is not being slowed down in the strict sense of the word, the budget indicates to the close observer that it is at least being thinned out. Where 1952 was supposed to be the peak aircraft production year in the program, there does not appear to be enough money to finance it.

Flexible Figures

First, that \$60 billion budget is not really a \$60 billion budget. The actual amount of new money available is \$56 billion. Mr. Truman arrived at the \$60 billion figure by a rather circuitous route. He threw in with the regular military budget another item of \$4 billion-plus for a military public works program for which legislation has not even been submitted. He could have, if he so desired, thrown in a few other items for which legislation has not been submitted, for instance the Mutual Defense Assistance Program, and made the budget total just about any figure he liked.

Just why he chose the \$60 billion figure is anybody's guess, but we have a suspicion. In January Mr. T announced that the 1952 military budget would be about \$60 billion. Of course, the actual figure changed several times between that announcement and actual submission of the budget. But since Mr. T has shown an alarming tendency of late toward putting his foot in his mouth, we suspect that he juggled the figures to make them match his January prediction so that for once he could say "I told you so."

But the overall budget figure is not the important one as far as the mobilization rate is concerned, since it includes money for operation of the service as well as procurement of equipment. The one in which the aircraft industry is interested is the aircraft procurement figure—\$14.5 billion.

'Substantial' Increase?

The press pointed out that this was a "substantial" increase over last year's procurement money, which totaled \$11.5 billion. We guess that \$3 billion might be called "substantial" in anything but a mobilization program. In this case it seems like anything but substantial to us.

In the first place, as we stated before, 1952 was to be the big year in the program, whereas 1951 was to be the gradual build-up year. Testimony by top brass before Congressional committees last year indicated that the cost of financing the 1952 part of the program would be considerably over the 1951 figure, probably at least 50% more. The \$3 billion increase is just a little over 25% more.

But there are other factors to consider:

1) The cost of equipment since the outbreak of the Korean war has gone up on a startling curve and indications are that it will continue to go up throughout fiscal 1952. This will take a large bite out of that \$3 billion increase.

2) Both the Air Force and Navy have already made inroads on their 1952 money. In order that manufacturers might make intelligent production plans on a long-range basis, the services made some commitments on future money availability after they used up their 1951 allocations. We have no information as to what extent these commitments have been made, and we don't expect the services to comment. But conversations with individual manufacturers' representatives have led us to believe that they are "substantial."

We are not attempting to censure the services for such commitments; it is sound business procedure and intelligent planning. But these commitments take another large slice out of the money which will be available for 1952 procurement.

Buying Power Trimmed

The combination of these two factors, it is obvious, cuts down considerably the buying power of that \$14.5 billion, cuts it down, we think, to the point where it represents only a negligible increase over the current year's procurement rate. It follows, then, that 1952 will not be the peak production year in the mobilization program and that the original concentrated program, where the Air Force was to have reached a 95-wing strength by July 1, 1952, and the Navy a comparable air strength by that date, will be thinned out a little. Top brass have already indicated in Congressional testimony that they will not achieve those goals on schedule.

Now, of course, we don't think that the \$56 billion will be the total defense budget for 1952. Congressional appropriations leaders have confirmed that an \$80 billion budget was urged by the Joint Chiefs of Staff and considered by the Administration as late as March of this year. It would appear that the \$56 billion is an interim figure, pared from the total requirement in order that the harried Administration, bothered by embarrassing investigations, MacArthur and a generally unfriendly public, might be spared the further embarrassment of having to increase taxes right now. But we think that there will be supplemental requests for additional money later in the fiscal year, probably not before January. These supplementals will help take up the slack in the mobilization rate, but the interim delay almost certainly is going to cause a degree of "spreading-out" in the procurement program.

Groups Plus Support: Wings

INCIDENTALLY, there is much confusion these days as to the difference between "95 wings," as mentioned above, and "95 groups," the former terminology. From a combat standpoint there is no difference. A wing is one combat group plus its supporting elements—maintenance, supply, mess, administrative squadrons, etc. The terms may be used interchangeably when speaking of the Air Force's combat strength.

PRODUCTION SPOTLIGHT

\$700 Million NA Backlog: North American Aviation's backlog has topped the \$700,000,000 mark, including some new orders not yet finally committed. The company obtained over \$194,000,000 worth of new business in the first quarter of 1951. Employment has increased to 25,500, including 3,500 at the new Columbus, O., plant.

L-1049 Progress: Lockheed Aircraft Corp. expects to have the first of its L-1049 elongated Super Constellations ready for flight certification tests by mid-summer, with first delivery to Eastern Air Lines scheduled for late autumn. The first production fuselage has moved from the pressure dock, where it underwent leak tests, to the final assembly line.

First K-F Shipment: Kaiser-Frazer Corp.'s Aircraft Division at Oakland, Calif., has shipped its first components for the Lockheed P2V Navy patrol bomber. First shipments were center section flaps.

Bell Move Starts: Bell Aircraft Corp. has started moving into its new government-owned Kenmore Avenue plant in Buffalo, N. Y. The facility, which is to be used for manufacturing by the company's Helicopter Division, was occupied by Curtiss-Wright Corp. during World War II. Bell already occupies an adjoining office building.

Douglas Expanding at Long Beach: Douglas Aircraft Co. is gradually expanding its facilities at its Long Beach, Calif., plant. The company will acquire an additional 520,000 square feet of floor space between now and July 1, making a total of about 2,200,000 square feet out of an original war-time area of 2,780,000 occupied by Douglas. North American Aviation is a joint occupant of the plant, but NAA is gradually relinquishing space as it winds up its B-45 bomber production and shifts its T-6 trainer program to a new plant at Columbus, O. Completion of these projects will leave only the F-86A jet fighter modification program in NAA's portion of the Long Beach plant. The latter project is scheduled for completion in April, 1952, and then Douglas will have the whole plant available for production of its Air Force C-124 heavy transport. Douglas owns 1,187,000 square feet of the plant; the remainder is leased from the government.

B-45 Modifications: North American B-45 jet bombers are undergoing modification at Norton Air Force Base, San Bernardino, Calif. The planes are flown in from operating bases. Modifications include canopies, pilot ejection seat systems and the addition of water injection to the General Electric J-47 jet engines.

Delays Slow P2V Line: Delays in deliveries of certain government-furnished equipment to Lockheed Aircraft Corp. have slowed down production schedules on the P2V Navy patrol bomber. The delayed equipment is of a type that must go in the airplane during assembly; it is impractical to complete the planes and install it later. As a result, Lockheed is shifting personnel from the P2V line to its jet fighter and Constellation lines.

Lockheed has received new Navy orders for Super Constellations (both R70 transports and PO-2W combat information centers) and P2V's (P2V-5 and P2V-6). Impact of these orders on operations and employment, however, will not be felt until 1952-1953.

Third Shift Increasing: Employment of second and third shifts is now common practice in key metal working industries, including the aircraft industry, according to a Labor Department survey. Of 6,000 plants surveyed, half reported operating more than one shift, about a third had two shifts and one-seventh had three shifts.

Plymouth Enters Aviation: Plymouth Division of Chrysler Corp. is the latest auto company to get into aviation production. Plymouth has received a contract to build hulls for the Grumman SA-16 rescue amphibian. Work will be done at the company's Evansville, Ind., plant, now working on auto assembly. This is Chrysler Corp.'s first airframe contract, but it has previously received a contract to build Pratt & Whitney jet engines.

—J. J. H.

INDUSTRY PERSONNEL

K. G. Farrar has been promoted from plant superintendent to plant manager for Douglas Aircraft Co. at Long Beach, succeeding James Simpson, recently named general manager of the division. Farrar has been with Douglas 17 years.

Thomas G. Lanphier has been named assistant to the president of Consolidated Vultee Aircraft Corp. He will handle policy planning for the company's guided missile activities. Lanphier has been serving as a special assistant to the chairman of the National Security Resources Board and prior to that was a special assistant to the Secretary of the Air Force for research and development.



Lanphier

Arthur G. Carlsen, formerly chief project engineer for the B-17, the B-29 and the B-50, has been named chief project engineer for Boeing Airplane Co.'s B-52 heavy bomber program. Project engineer for the first B-52 production bombers is A. I. Ostlund, while Frank Terdina is project engineer for the experimental XB-52 airplanes.

H. Lloyd Child has been appointed assistant director of Republic Aviation Corp.'s activities at the Air Force's flight test center at Edwards AFB, Muroc. Child spent nearly 20 years with the Curtiss-Wright Corp. and from 1947 to 1950 served as assistant to the Civil Aeronautics Administrator and as executive secretary of the Non-Scheduled Flying Advisory Committee.

Kendall Perkins, who joined the engineering staff of McDonnell Aircraft Corp. as a project engineer in 1941 and has been manager of engineering since 1949, has been elected vice president of engineering.

MILITARY PERSONNEL

Rear Adm. Thomas S. Combs, new chief of the Navy Bureau of Aeronautics, who was sworn in May 1. He replaced Rear Adm. Alfred M. Pride, who was ordered to sea duty. Combs was chief of staff and aide to the Commander, Atlantic Fleet, before coming to the BuAer post.



Adm. Combs

Col David C. Schilling, formerly a staff officer in the fighter branch of the Deputy Chief of Staff, Operations, USAF, has been named commanding officer of the 31st Fighter Wing based at Turner AFB, Albany, Ga.

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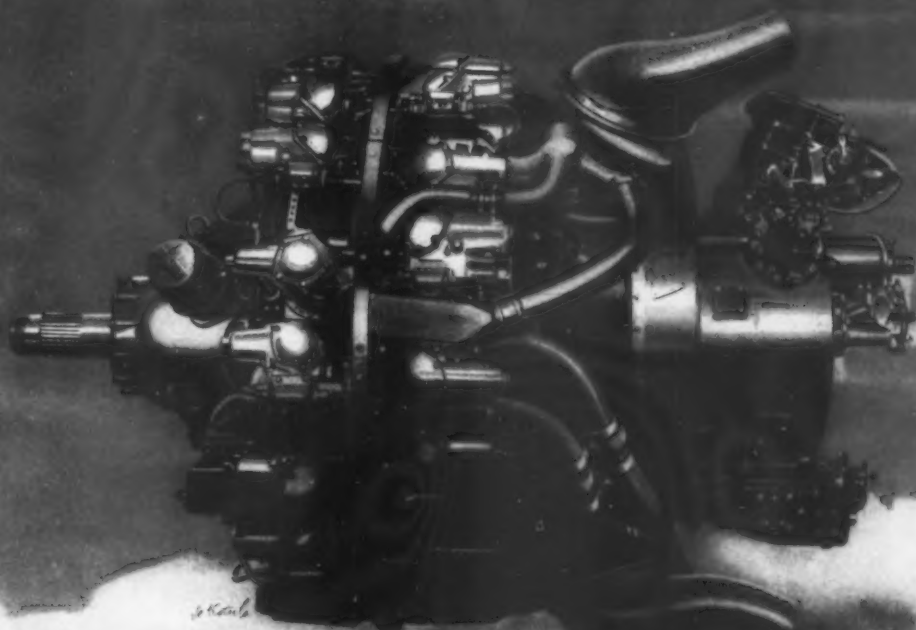
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Trans-Atlantic Teamwork

... The twin-jet Canberra, being groomed to bolster our tactical air power, is a working example of British-American cooperation. Originally designed in England as a high-altitude radar bomber, its flight tests proved it to be as effective at low-level operations. Now, a night intruder version of this light jet bomber will be added to our own Air Force, built by Martin under license from English Electric Co., Ltd.

The Korean conflict has re-emphasized the importance of tactical air power in low-level support of ground troops. To this mission, the Canberra brings exceptional maneuverability at high combat speeds, and at low levels and low speeds . . . ability to whip around like a fighter and turn with the best of modern aircraft . . . ability to carry a potent, destructive wallop!

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AMERICAN AVIATION

Small Design Errors Cost Time and Money

"LEARN from the mistakes of others; you won't live long enough to make them all yourself." This is the pointed advice given by United Air Lines' W. W. (Bill) Davies in his paper "Treatise on Experience" presented before the Society of Automotive Engineers late last month.

Davies presented proof that many of the problems and hazards presented by aircraft operation are those directly relating to shortcomings in design, failure of the industry to consistently apply all the lessons which experience has uncovered. Said Davies: "There is always a first time. There need not be a second."

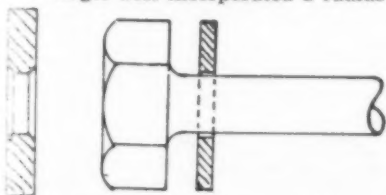
In a well-documented paper aimed at promoting the dissemination of the fruits of experience to both experienced hands and neophytes, Davies showed the cause and effect of many design shortcomings in transport operations. Through the courtesy of United Air Lines, AMERICAN AVIATION reproduces selected examples from the paper.

Each one of these failures cost the airlines time and money to correct. In every case inspection campaigns had to be conducted to determine if all the aircraft of the same model were similarly arranged or the parts of similar design. As can be readily seen, some of these shortcomings produced hazards to air safety.

Warned Davies: "It should be remembered that these do not apply only to a given unit or type of design; but the problems pointed out are of a general nature that can be encountered by any designer, or any shop man whether he is a propeller manufacturer, airplane manufacturer, engine manufacturer, airline operator kitchen utility manufacturer, bathroom designer, or what."

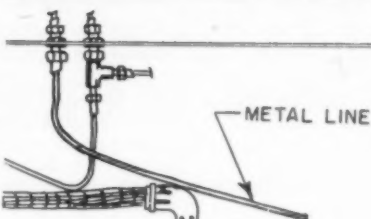
Details Important

Experience showed that a larger bolt was required in the landing gear wheel to prevent bolt failure. The larger bolt incorporated a radius

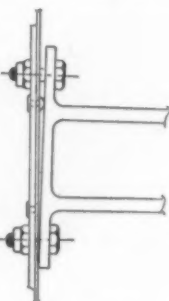


under the head. The old washer used under the head was retained. Sharp edge of the washer cut into the bolt radius and the bolt failed. A chamfered washer (left, above) would

have prevented this failure. This again emphasizes the fact that design engineers and mechanics must be ever conscious of the effect of every modification on interrelated parts of the aircraft.



When a new navigation instrument was installed in this instrument panel clearance was provided between the new and larger instrument and the related plumbing. This clearance did not include allowance for instrument panel movement on the shock mounts, worn mounts, poorly rigged plumbing, etc. Result was that two metal lines (see photo) were worn through. The installation required more mature analysis of the factors governing final clearances.



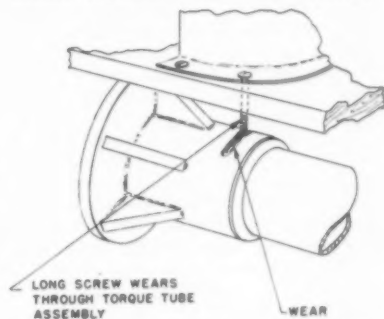
Basic design of this flight control pulley bracket (see photo) was proper. Design required flush mounting of the bracket to the support structure. This in turn required use of flush rivets in the area covered by the bracket. Inspection prior to installation of the bracket failed to discover use of a round head rivet.

Bracket was installed over the rivet. Concentrated bending stress inboard of the attaching bolt caused fatigue failure of the bracket.

Trouble by Design

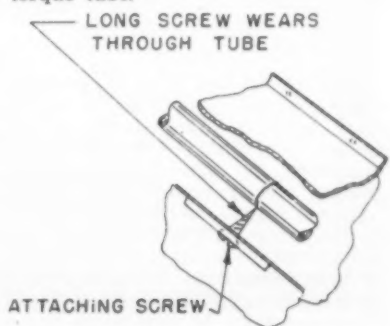
Its impossible to guard against every contingency. But experience has shown in many cases that some design practices repeatedly cause trouble. Shown here are two instances where basically sound designs were rendered dangerous by minor "unrelated" practices employed once the aircraft was in operation.

A small cover plate or guard is used around the base of the control column to close off the opening in the floor. Under the floor the elevator torque tube, which must rotate each time the control column is moved, is mounted. As produced, the design appears sound. In operation a mechanic replaces the guard attaching



screw with a longer screw. This misfit extends beyond the floor and cuts into the torque tube fitting. It could prove dangerous.

This is not the first time this design shortcoming was experienced. In an earlier aircraft design a triangular shaped housing was used to cover the landing gear torque tube. Each time the gear was raised or lowered this tube had to rotate. Installation of a hand fire extinguisher on this torque tube housing provided an opportunity for someone to use an oversize screw on the mounting bracket. The extra screw length permitted the fastener to cut into the torque tube.



ATTACHING SCREW

Sharp Notches in Structural Members:



Fig. 1

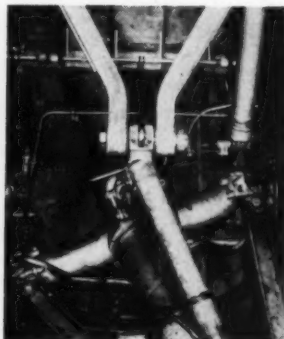


Fig. 2

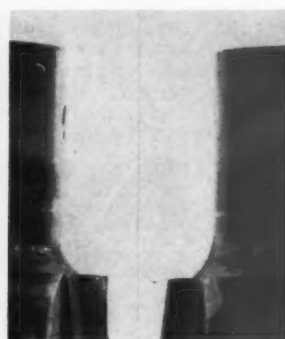


Fig. 3



Fig. 4



Fig. 5

The effect of sharp notches in structural members has been known to all technical industries for many years, yet failure to apply this knowledge is reflected in numerous aircraft and engine designs and costs the aircraft industry considerable money and effort annually.

Take this rocker-box cover (Fig. 1) on the cylinder of a radial aircraft engine. The cover is cast of aluminum alloy, is used to seal the rocker-box housing. Bosses and attaching nut surfaces are spot faced. Note what

happened. In spot facing the cover, an unrelieved sharp corner was formed. A fatigue crack spread from this point, permitted oil leakage. Blending sharp corners out by machining with a tool of generous corner radius eliminated this problem.

Collapse of this landing gear (2) resulted from failure of a fitting which acts as pivot for rotation of the gear and carries the load into the airframe. Cost of this failure was considerable but cause was simply the failure to

provide a proper radius between the load carrying portions of the fitting. Note the incorrect (left) and correct (broken fitting) junctures in Fig. 3.

Initial design of the aircraft engine crankshaft, incorporating a threaded end for attachment of the reduction drive coupling spanner nut, did not provide for proper stress distribution. Result is shown in photo of fractured portion (Fig. 4) while (5) shows how this could have been prevented. Crankshafts were modified by use of a relief cut and trouble corrected.

Weight-Saving, Work-Producing Designs:

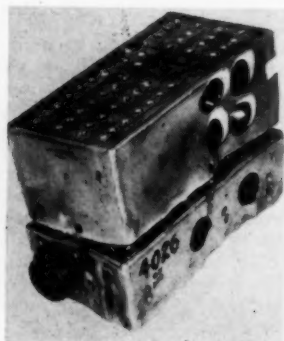


Fig. 6

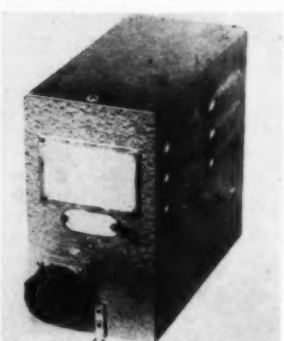


Fig. 7



Fig. 8



Fig. 9

This control box (Fig. 6), containing electronic equipment, is shown after being returned from normal service use. Designed for quick replacement, the lightweight aluminum housing and spring clip attachments were not rugged enough to withstand normal usage. Final result was due to improper support and protection. Service experience dictated that a stronger housing (7), one made of aluminum alloy, be substituted and a

more satisfactory cover fastener (a screw) be provided.

This terminal junction box (Fig. 8), constructed of 3 SO soft aluminum and supported by two channels to which it was riveted, was installed on the aircraft engine motor mount. It carried an assortment of flexible conduit assemblies with relatively little conduit support. During its early service life the box pulled out of the rivets and hung only

partially supported. As shown here the channels are held in place by screws.

Redesign included use of 52S half hard aluminum in the junction-box design, use of "U" clamps fastened to the engine mount tube with two web-type channels welded to the clamps. Box is fastened to the channels with bolts through the rear of box which is also reinforced with heavy weight channels. (Fig. 9).

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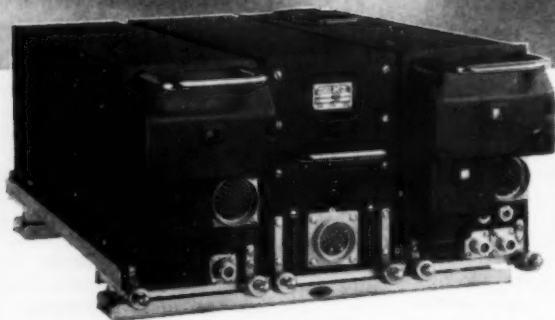
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KANSAS CITY 1, MISSOURI, U.S.A.

ATA's 1951 Engineering and Maintenance Conference

Toastmaster Luke Harris, general production manager Pacific Airmotive Corp.



HEATING, ventilating and pressurization session is shown underway (at left) with chairman Dave North at extreme left. Others at table (left to right) are: H. W. Holzapfel, WAL; L. W. Olsen, UAL; E. P. Buckthal, UAL.



SMALL groups working around the discussion tables in the hydraulics and propeller sessions. Left photo, reading left to right, include: R. B. Ault, EAL; J. M. Holland, EAL; G. D. Bruegger, C&S. Photo at right includes R. W. Stowell, Capital; E. Durham, Continental; W. B. Starks, C&S; and George Muncie, C&S.

By WILLIAM D. PERREAULT

OVER 650 technical representatives of the airlines, manufacturers, oil companies, military service and other interested groups attended the Air Transport Association's annual engineering and maintenance conference in Chicago in late April to discuss current airline engineering and maintenance problems. The meeting was the biggest in the history of the conference.

It was this same mushrooming size of the conference, which was about 20% bigger than last year, which introduced the most controversial issue of the meeting. Earlier this year the ATA's operations conference had passed a resolution aimed at curbing the size of the engineering-maintenance conference. The operations conference itself is relatively small and limited primarily to airline representation.

This year some 350 of those in attendance at the E-M conference were manufacturers' representatives, 200 from the airline engineering and maintenance departments, 25 from oil companies, 25 from CAA and the remainder from other government agencies, CAA, the military services, etc. Those intimately familiar with the conference history feel that it is this full-scale industry participation which makes the conference the success which it has been.

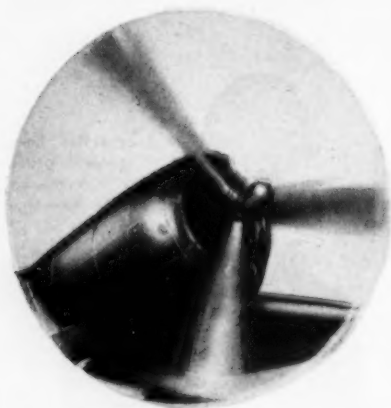


Stanley Shatto
Western Air Lines
Conference
Chairman

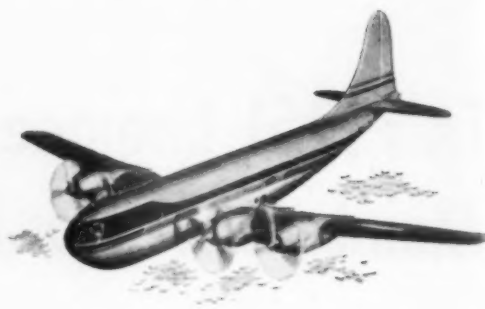
In operation the conference works on an agenda of several hundred

questions submitted by the airlines. These questions are a direct measure of the airline experience with each aircraft and engine type as well as with related components. An airline asks a pointed question about a particular type of spark plug with which it is experiencing difficulty. In the engine or ignition session this question is raised. The plug manufacturer may indicate the operator is using fuel with too much lead content. The fuel and oil company representatives are there, carry through with pertinent data on this phase and possibly point to the servicing practices. Here the airlines compare practices, often come up with a cure.

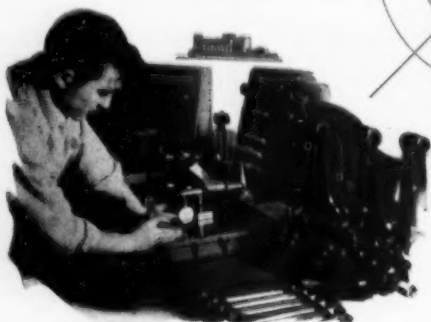
The same type of cooperative and searching analysis of each question is undertaken. Considerably in advance of the meeting all of the groups have been supplied with copies of the agenda questions. They know what questions will be asked which bear



PAC engine overhaul
means singing, surging power



PAC engine overhaul
means more time
between overhauls



PAC quality workmanship
sets the standard of the industry



PAC testing methods
mean increased efficiency of operation

Engine Overhaul Efficiency...

... is not only essential to safety standards, but can increase operational profits as well. For example, Pan American reports that one run is getting 1500 hours between overhauls on R-2000 engines. PAC engine overhaul efficiency also helps Pan American's giant 4360 - 3500 hp engines to get 900 hours between overhauls. Maintenance men

and Air Force Engineers throughout the country consult with PAC engineers and craftsmen to study these methods. Incidentally, Pacific Airmotive is the only privately owned concern in the country authorized to overhaul these 4360 engines. The CAA has also approved the 25% saving of test-run time, as pioneered by PAC engineers.



It's great to work and live in sunny California. Engineers, and many categories of skilled aircraft workers are needed by PAC... drop us a line.



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SHOWN here are E. Cheyno, All American Airlines, chairman of the fuel and oil systems session; R. K. Horton, Trans World Airlines, chairman, ground servicing and shop equipment session; and F. G. Bennett, Pan American, chairman, engine session.



Winners of AMERICAN AVIATION's annual engineering and maintenance awards are shown receiving commemorative plaques and cash awards from Wayne W. Parrish, editor and publisher of AMERICAN AVIATION, during the dinner banquet. At top, John Lindberg, Jr., Pan American, accepts the engineering award for his work in development of the Sperry engine analyzer. Below, Elmer Griggs of United Air Lines receives the maintenance award for his work in solving a current engine cylinder overhaul problem.



THREE additional session chairmen: R. R. Stark, Eastern Air Lines, hydraulic and vacuum systems session; J. T. Dymont of Trans Canada, ignition session, and J. D. Crane of National, instruments session. Not shown in these groups are R. L. Anderson heading propeller discussions (see cover); and David North (see working group photo).

on their own production or processes and come ready to discuss the problem in search of justification or an intelligent basis for change. This is the type of action not possible from a conference with controlled attendance.

Because this is so, the engineering-maintenance group did not adopt the resolution of the operations group. They did discuss, and will later vote on, a proposal which would simplify physical handling of the conference. This proposal calls for devoting the first day of the next conference to a discussion of specific aircraft and engine problems in private sessions between the operators and the manufacturers involved. These sessions would not be open to the entire industry.



J. B. Franklin, Capital, Chairman-Structure & Controls

The second and possibly the third day would be devoted to more general items with attendance open as in past years.

Meanwhile, the E-M conference voted in a new general chairman, R. L. (Doc) Anderson (see cover), director of research and development with Chicago & Southern Air Lines. Miami, Fla., was voted as the site of the 1951 conference with the exact place and date yet to be decided.

Answers in Advance

One innovation in this year's conference was the compilation of prepared answers by a number of the manufacturers (and a few airlines). Manufacturers such as Lockheed, Douglas, Convair, Vickers, etc., prepared quite elaborate brochures with the questions relating to their equipment reproduced along with their activities toward solving the problems posed. The Lockheed brochure included considerable free space for hand-written notes.

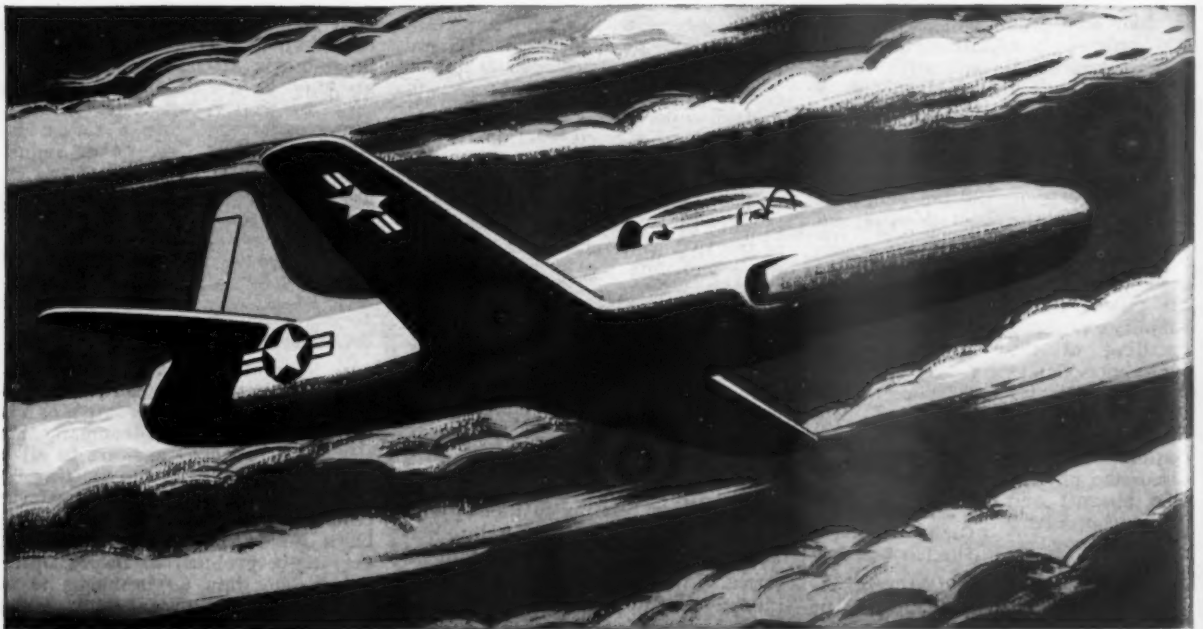
In some ways these presentations are admirable. They make it possible for those in attendance to pay more attention to the discussion with less devoted to making a running record of important parts. At the same time they could have the effect of minimizing free discussion not included in the text and thus detract from the meeting's effectiveness.

One airline representative said his company had circulated prepared answers to all of its representatives at the meeting "so that they wouldn't get their stories crossed up." There would appear to be a major difference between reviewing a problem to insure up-to-the-minute data on problems to be discussed and that attitude which provides for hiding behind carefully



W. C. Mentzer, UAL, Chairman-Electrical Systems

Jet Fighters



With J-48 Turbo-Wasp Engines Prove Once Again That

***"All the Years of Work are Worth it
when the Prize is Air Supremacy"***

PICTURED HERE are two of the nation's top fighters—the Navy Grumman F9F-5 Panther and the Air Force's Lockheed F-94C. Each of these single-engined airplanes develops more power than any four-engined bomber of World War II . . . thanks to the J-48 Pratt & Whitney Turbo-Wasp, the most powerful jet engine to roll off production lines in America today.

THE OUTSTANDING PERFORMANCE of this power plant wasn't easily achieved.

IT ALL BEGAN in May 1947 when Pratt & Whitney Aircraft obtained a license to build its own version of the Rolls-Royce Nene engine. Americanized—produced entirely from American sources of material and further developed—this engine, the J-42 Turbo-Wasp, was in production late in 1948.

ONE YEAR LATER, the first experimental model of its successor, the more powerful J-48, was ready for flight test. Ahead still lay a long and difficult program of development, test and re-

finement—not only of the complete engine but of individual parts and sub-assemblies.

ONLY IN THIS WAY was Pratt & Whitney able to build into the J-48 the same dependability and high performance that marked Pratt & Whitney piston engines which furnished more than half the power of U. S. air strength during World War II.

LATE IN 1950, the first production J-48 engines were delivered to the Armed Forces—and today their high power output is being reflected in the outstanding performance of these Navy and Air Force jet fighters. To meet heavy demands from the Armed Forces for these engines, Pratt & Whitney Aircraft is now rapidly stepping up its own production and has also licensed the Dodge Division of the Chrysler Corporation to build additional quantities. Meanwhile, Pratt & Whitney is continuing to develop and further refine the J-48 Turbo-Wasp to help assure air supremacy for this nation.

**Pratt & Whitney
Aircraft**



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OPERATIONS & MAINTENANCE

chosen prepared texts in a meeting of this sort.

Each year the questions submitted by the airlines have a strangely familiar ring yet the discussions invariably reflect the results of another year's operation and the disappearance of certain items from the agenda spell the successful end results of the previous year's conference. Last year the airlines were having extensive problems with aluminum electrical wire, an innovation on post-war equipment. By this year experience with the aluminum wire, better handling procedures and personnel training had virtually eliminated it from the agenda.

"O" ring seals in hydraulic equipment have consistently caused troubles for the airlines. Through the previous conferences and via field service personnel, manufacturers were made aware of the shortcomings of the "o" ring seals and now a move is well under way to eliminate the rings by redesign of the valves and related moves. When failure of an industry group to meet industry needs is met with positive action of this sort, it awakes the rest of the industry and provides for improved relations on all sides.

Some other lessons that this years ATA engineering and maintenance conference uncovered:

Instruments

- Repeated modifications of the circuits of the Bendix PB-10 autopilot, although each minor in itself, brought about unstable conditions which went unexplained for some time. Rebalancing of whole circuit was required.
- While some airlines, such as United, have equipped their airplanes for automatic approaches using autopilots and the ILS equipment, shortcomings in the ILS station equipment are aggravated during automatic approaches with the aircraft attempting to follow path deviations. This calls for improvements before automatic approaches are feasible.
- Radium marking of instrument dials is on the way out. Selective red or white cockpit lighting is the trend with developments necessary to give good visibility to instrument markings (normally in red and green) under red-light conditions.

Hydraulics

- Defense program is forcing manufacturers to standardize on AN fittings in all plumbing systems but many airline aircraft have AC fittings. Joint industry action to prevent major upsets is required.
- Many airlines using 3,000-pound pressure systems have been using 1/4 hard steel tubing and experiencing failures due to fatigue. Discussion

OPERATIONS & MAINTENANCE



19-Foot Prop—This 19-foot Turbo-Hydromatic propeller, now under test by the U. S. Air Force at Wright-Patterson AFB, is the third of a series of Hamilton Standard Propeller's turbine-engine props to undergo USAF and Navy testing. Designed for use as shown with engines delivering over 5,000 horsepower, or coupled for dual-rotation installations, the hollow-steel bladed propeller is electronically governed but uses hydraulic pressure for blade pitch changing. HSP has logged more than 2,600 hours flight and ground testing on turbine-engine props.

proved that $\frac{1}{8}$ hard steel should be in use and this would correct shortcoming.

- Aeroquip is manufacturing a super high pressure flexible hose in $\frac{3}{4}$ -inch size and this is under service test.
- Development of non-inflammable hydraulic fluids is moving along at a fast pace. Many airlines are using Douglas-Monsanto Skydrol in hydraulic systems with satisfactory results but paint removing characteristics, effect on certain seals, etc., is considered bothersome. Navy is switching from Hydrolube H-4 to Hollingshead Hydrolube H-2 and reports that in addition to meeting general performance and non-inflammability requirements, H-2 also meets the low temperature needs of the Navy at minus 65 degrees Fahrenheit.
- Eastern Air Lines has specified the Pesco 3,000-psi, gear-type hydraulic pump for their Martin 4-0-4's. This is probably the first production aircraft order to use a gear-type pump in a 3,000-psi system but several airlines have accumulated extensive data on the new pumps.

Engines and Oil

- Virtually all the airlines are using engine oil without changing between engine overhauls but engine manufacturers continue to recommend that oil be changed much more frequently.

It is generally agreed that engine oil characteristics remain unimpaired with long operation but feeling is that contaminants in the oil do affect the engine to some degree. Oil changes are made at frequent intervals on the Pratt & Whitney R-4360 to meet warranty requirements.

- No satisfactory detergent oil, an oil which will help remove deposits as it circulates through the engine, has been developed. Pratt & Whitney has developed one which shows promise but as yet no airline has started service test on such an oil. There is some feeling that it might be better to leave sludge accumulations alone during the overhaul life of the engine.
- Interesting work is being done with ceramic coating of engine exhaust stacks. PAA is using ceramic-coated stacks, processed by Ryan, which minimize stack failures. These stacks, which cost 10-15% above the regular units, are coated with about .015 inches ceramic. The stacks can be recoated after being used in service. Eastern Air Lines has also had some experience with ceramic-coated stacks processed by Stewart Warner but these used a much thicker coating of ceramic and were much heavier.

Ignition

- Engine analyzers, both the Bendix and Sperry units, continue to occupy the center of attraction in ignition system discussions. Trend is to the wide-spread adoption of analyzers in the air as a flight tool or in even more cases as a unit for troubleshooting ignition and other engine troubles on the ground. Feeling now seems to be that even the small airlines might well gain from the proper use of an analyzer.
- Massive electrode spark plugs continue to see favor over the fine-wire plugs. None of the airlines appear to have closed the book on fine-wire plugs but the precious metal required for fine-wire units and resulting high initial cost have generally worked against their acceptance at this time.

Electronics

- Aeronautical Radio, Inc., is working on a series of ten ruggedized tubes which should minimize some tube failure problems. Trans Canada has also been working on such a program. Effect of this program on maintenance and on replacement cost is best indicated by United Air Lines' experience which showed that a specific tube which was number one offender in electronic difficulties moved to 27th place when a redesigned tube was substituted in its place. Average tube life of the new tubes at TCA is 5,000 hours compared with 1,000 hours on earlier tubes.

2 in 1

ENGINE PARTS

Today, as in years past, leading airlines of the world continue to depend on AE&P for engine parts, overhaul tools and all types of aeronautical equipment. AE&P provides swift delivery out of the largest, wholly-owned inventory of its kind in the world.

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American Air Service, at Charlotte, N.C., operates the South Atlantic's leading engine overhaul shops. Now an affiliate of AE&P, American Air Service offers genuine and positive economies in the form of maximum engine efficiency, plus greater operational time between engine changes. These are the result of superior engine overhaul.

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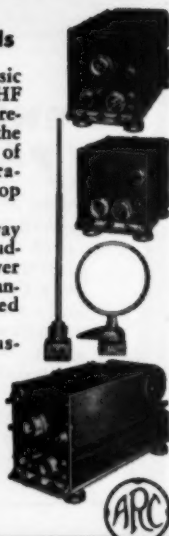
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ARC Type 11A meets basic needs by providing VHF transmission, LF range reception suitable for the exacting requirements of night instrument operation, and rotatable loop navigation.

ARC Type 17 is 2-way VHF equipment, including tunable VHF receiver and one or more 5-channel, crystal controlled VHF transmitters.

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All ARC airborne equipment is designed for reliability and performance, not to meet a price.



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First All-Metal • All-Weather VIBRATION & SHOCK MOUNTS

The PB-10 autopilot amplifier, above, and many flight proven ECLIPSE-PIONEER electronic units are protected by all-metal Robinson mounting systems. MET-L-FLEX mounts meet specifications JAN-C-172A and AN-E-19 plus CAA approval for air carrier! Write today.

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OPERATIONS & MAINTENANCE

Extra Section

By William D. Perreault



IT'S NOT always enough to include comprehensive installation and servicing data with a new piece of equipment. Too often the instructions do not reach the man responsible for servicing work. During the ATA engineering and maintenance conference in Chicago late last month, one manufacturer suggested that a particular fatal accident during servicing would not have happened if the instructions had been followed. We think Eastern Air Lines' Bob Stark had the real answer in his comment. "We can't remember everything we know." Bob urged that the units should be prominently marked with instruction decals so that memory alone would not be the basis of safety.

Speaking of decals, we've run across an interesting development in that field. The airlines consistently pay penalties when buying certain types of equipment because the total quantity purchased is small and tooling costs high. There is often a lack of coordinated effort to insure minimum costs by pooling orders and by some degree of standardization. Cassel Decal Co., 42-23 166 St., Flushing, N. Y., is now attempting such a clearing-house function for aircraft decals. In the company's short life, industry interest has proved exceptionally high.

A magic carpet has nothing on a flight in the Bell 47D1 helicopter. While in New York for the SAE meeting, we had the pleasure of being the first passenger to make the trip from Heliport No. 1, located on top of the Port of New York Authority building in downtown New York, to Idlewild airport by helicopter. In the comfort of the 47's clear plastic cabin bubble, it is a strange and pleasant experience to look out over your size 12's and see the city of New York with a real bird's-eye view. Even more pleasant was the 20-minute, traffic-free connection between the two highly congested areas. The flight, piloted by Bell's Hans Weichsel, was arranged by Avro's Dixon Speas and SAE's Bill Milne as part of the air show at Idlewild.

As professional meeting goers and veterans of several ATA engineering and maintenance conferences, we think this year's meeting was the best yet in the matter of general handling. Credit goes to Stan Shatto of Western Air Lines, general chairman of the conference, and to Al Dallas and M. B. Spaulding of the ATA staff who are responsible for the overall planning plus the mass of details that spell the difference between success and failure of the best-laid plans.

Friends in the airlines, responsible for training new copilots in the mechanical side of aircraft operation, have been telling us that the newest recruits are green to many of the multi-engine aircraft complications. Propeller feathering, engine-out procedures, complex fuel system operation, etc., are all sources of concern. In the current *de Havilland Gazette* the end result would seem to be well explained: "I'm slow at learning this technical stuff but once I do learn it I remember it for hours."

Everyone seems to want large cargo loading doors in new aircraft and the need is certainly apparent. From the manufacturer's viewpoint, however, this demand and that for cabin pressurization work against each other. One prominent aircraft designer has stated that the main cargo door in the Douglas DC-6A was "the biggest structural problem they ever had." The door has to withstand 19 tons' pressure. Result is a sharp increase in structural weight, virtually double the weight required for an unpressurized door and jamb of equivalent size. Once the aircraft is in service, maintenance will also be difficult unless extreme care is used in the handling of fork-lift trucks and other heavy loading equipment.

AMONG THE SUPPLIERS

Sperry Gyroscope Co. of Canada Ltd. has named B. D. Russel, formerly assistant sales manager of Canadair Ltd., director of contracts for Sperry and its subsidiary, Ontario Hughes-Owens Co. Ltd. His headquarters will be in Montreal . . . Ludwig A. Majneri, former Warner Aircraft Corp. vice president and chief engineer, has



Russel

formed Aeroguild, Inc., 11639 Klinger Ave., Detroit, Mich., to engage in hydraulic developments and the manufacture of high precision products and parts . . . George Thorson has been appointed vice president in charge of aircraft sales for Meletron Corp., Los Angeles manufacturer of pressure switches.

Minneapolis-Honeywell Regulator Co. has completed arrangements to serve as consultant to the Atomic Power Division of Westinghouse Electric Corp. on valve problems . . . Gene T. Neudeck has been named general sales manager of the V. L. Graf Co., Romeo, Mich., manufacturers of hydraulic fittings and tube and hose assemblies. He was formerly with the Aeroproducts Division of General Motors in Dayton, Ohio . . . Carl R. Brick has been named assistant to the president of Borg-Warner Corp., Chicago, Ill., and Andrew W. Rose has been appointed assistant general manager of the Warner Gear Division at Muncie, Ind. The Marvel-Schebler Products Division of Borg-Warner has named Donald N. Arndt assistant general sales manager.

Edward K. Foster, general manager of Bendix Radio Division, has been elected a vice president and member of the executive committee of Bendix Aviation Corp. He will continue to maintain headquarters at Towson, Md. . . . J. E. Leonard has been named manager of the Landing Gear Department, Aviation Products Division of Goodyear Tire and Rubber Co., and the Industrial Brake Department will operate as a separate unit with C. A. Hulsemann as manager . . . Aviation Engineering Corp., Long Island, N. Y., has a backlog in excess of \$1,000,000 in orders for capacitor type fuel gages and temperature indicators.



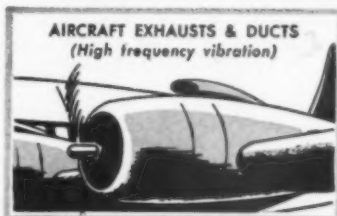
Foster

William S. Richardson, president of the B. F. Goodrich Chemical Co. of Cleveland, has been elected a vice president of the B. F. Goodrich Co. . . . Electric Storage Battery Co. has started a \$5,000,000 expansion program at its Crescentville plant near Philadelphia, including a new engineering department building which will have 40,000 square feet.

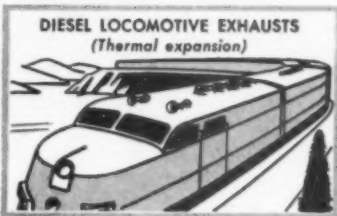
BREEZE *Job-Engineered* BELLOWS



...Give LASTING PROTECTION Where Ordinary Bellows Fail



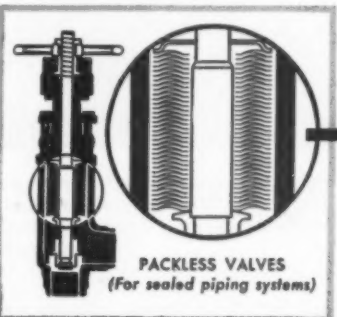
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Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

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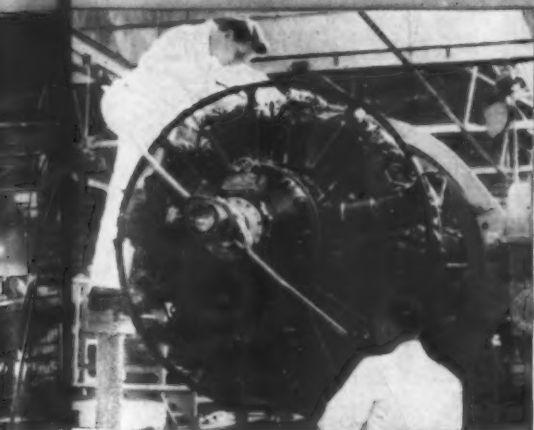
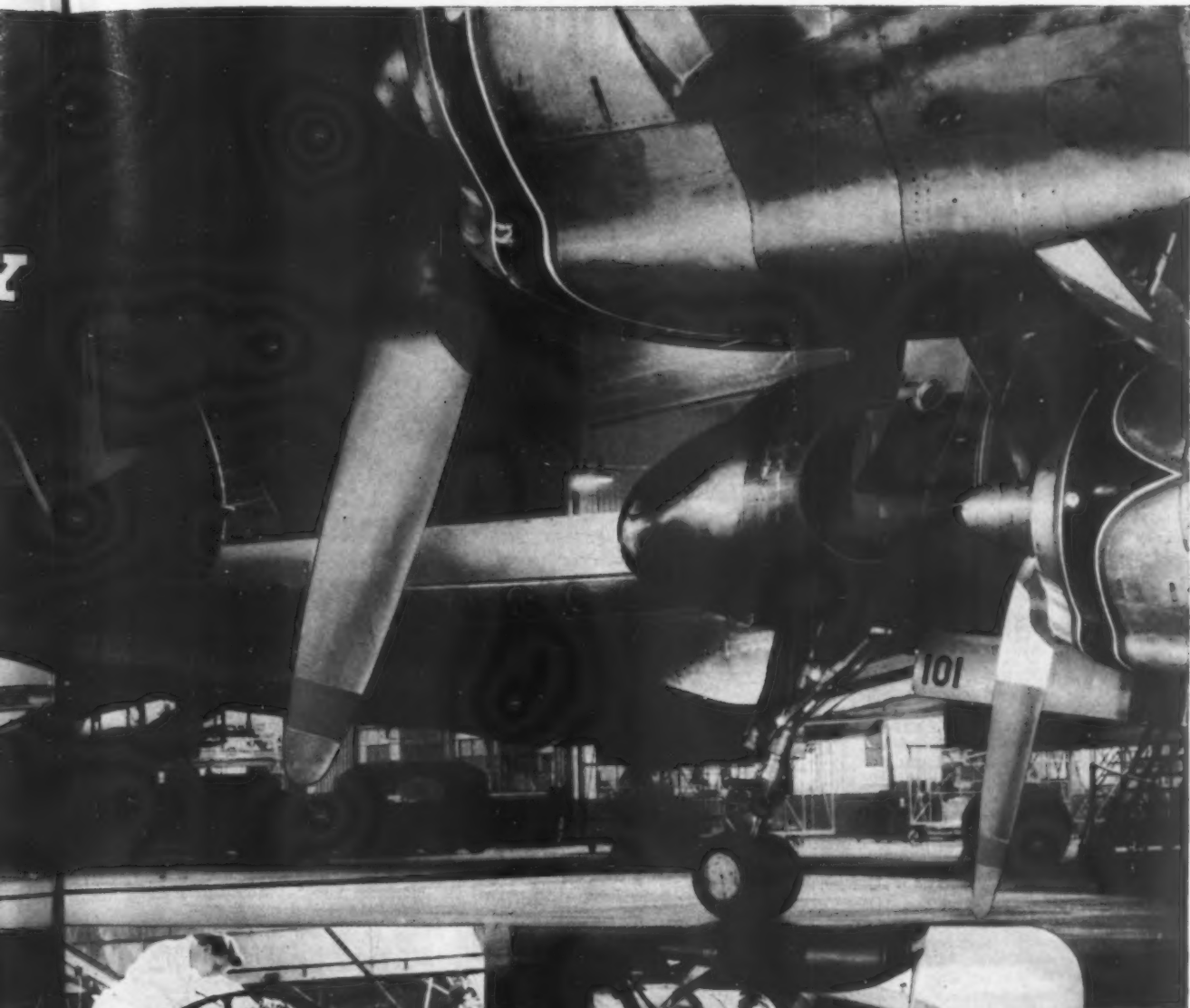
Everywhere in Eastern Air Lines' great maintenance base one sees concrete signs of its deep concern for safe, dependable air travel. Every operation is performed, every decision is made, with this principle in mind.

It is doubly significant, therefore, that Eastern has selected Sinclair to handle its vital lubrication needs.



Plane Taking Its Physical. Eastern's Miami base — one of the world's largest, most complete maintenance centers. About once a week, every airliner returns here for a major examination.

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They Double Check — for double dependability. On each major engine overhaul Eastern expends some 500 man-hours—many more hours than standard requirements. Many of the tests and checks made are exclusive with Eastern, too.

Eastern Takes No Chances with engine lubrication, either. Only Sinclair Aircraft Oil is used in the Great Silver Fleet. Sinclair lubricants reduce costs, provide fine, safe aircraft engine lubrication.

AIRCRAFT OIL for double dependability
 AVIATION SALES, 630 FIFTH AVENUE, NEW YORK CITY.

NEW PRODUCTS



ONE OF the Cee Bee units for stripping integral fuel tank sealants is shown here in place under the wing of a Douglas C-54. Note the design of the nozzle bar, use of "jiffy" plates to seal off tank openings. Pacific Airmotive Corp. is handling the Cee Bee development on an exclusive basis in the commercial field.

Unit Cuts Tank Stripping Time and Costs

A new and effective unit for stripping integral type fuel tanks of Thiokol, Zinc Chromate, and Buna-type sealants has been developed by Cee Bee Chemical Co. Pacific Airmotive Corp. has been appointed exclusive world-wide agent for handling of commercial contracts for use of the units. PAC will set up required facilities at its base in California and will also provide mobile units to handle the stripping work at airline and executive aircraft operating bases.

Primarily the Cee Bee system consists of a mobile reservoir of Cee Bee stripper along with pumps and related equipment necessary to force the stripper into the tank and dislodge the sealants. One of the principal components is a nozzle bar (see photo), specially designed to meet the tank dimensions of each type of tank, which acts as the outlet for the stripper (and later for the emulsion cleaners) which accomplish the stripping.

Major savings in direct cost, labor and airplane out of service times are the principle advantages of the system. PAC's experience has shown that stripping costs have been about cut in half with the new system as has the time required for the job. In typical cases time has been cut from 48 to as low as 16 hours and cost from \$3,600 to \$1,600. Whereas the old style stripping methods take some 20 men five days of work, the Cee Bee system is simple to set up and once installed requires the attention of only one man.

The newest development, control of world-wide commercial work with this unit by Pacific Airmotive, follows three years of development work in which Aircraft Maintenance Corp. at Van Nuys, Calif., first tested the system, then Lockheed and finally Transocean. PAC started using the system six months ago on three USAF C-54's, found it so successful that they adopted it as standard

equipment and have since done 16 more planes.

In addition to two units operated by PAC, several other units are in use. At Douglas's Long Beach plant five C-74's have been stripped of fuel-tank sealants in record time, Southern California Aircraft Co. is using a unit on PBV's, Flying Tigers have used the latter unit and two Air Force bases are using them for C-54's and Convair B-36's.

In operation the procedure, which has been approved by Wright Field, Convair and Douglas, involves spraying Cee-Bee stripper (of a type chosen to match the type of sealant involved) into the tanks at about 600 pounds-per-square-inch pressure. The specially designed nozzle bar through which the stripper is sprayed assures that every part of the tank is subject to the high-pressure stream. All fuel tank openings, except those draining the stripper back to the 300 gallon supply tank, are closed off during the operation.

This is followed by tank rinsing with Cee Bee A-3 cleaner diluted with equal volumes of water. The surfaces are then cleaned and dried with circulated hot air.

For further information contact Pacific Airmotive Corp., 2940 N. Hollywood Way, Burbank, Calif., and please mention AMERICAN AVIATION.

Deodorant Tablet

A new quaternary ammonium tablet for killing odors associated with chemical toilets in aircraft has been announced by Fine Organics, Inc. A single tablet will handle up to three gallons of solution. Color released by the tablet shows proof of treatment. Stratotabs are now being used by the U. S. Air Force under the designation "FO-201," the manu-

facturer states. Stratotab is packaged in small cylinders with 18 tablets each, 50 packages to the case. Individual tablets are protectively coated to insure stability in storage over wide temperature ranges. Many of the problems related to liquid deodorants are eliminated. A sample package of 18 tablets shipped for trial at \$2.00 postpaid.

When contacting Fine Organics, Inc., Aviation Industrial Chemical Div., 211 E. 19 St., New York 3, N. Y., please mention AMERICAN AVIATION.

Actuator

A low-cost 24-volt actuating mechanism for controlling the movement of a gear-rack assembly in aircraft control equipment has been introduced by ETC, Inc. Easily adopted to other applications, such as a tripping mechanism, switches, valve operations, etc., the ETC actuator can be provided for other voltages including 110 volt AC. Spring design provides minimum pressure in



"open" or non-operating position with maximum pressure for closed position. Uses no hinge pin or bearing mechanism. Life tests in excess of two million operations have been run. Entire assembly weighs only 2 ounces, occupies a space 1 1/4 inches by 1 inch. Mounting is made with two 6-32 screws.

When contacting ETC, Inc., Niles, Michigan, please mention AMERICAN AVIATION.

Hand Truck

A dual-purpose hand truck with built in hydraulic hoist for lifting and stacking is being marketed by Clark-Hopkins Equipment Corp. Particularly useful in loading and unloading barrels and heavy cases from the ground level to truck beds and other work areas. Weighing only 111 pounds, the Clark-Hopkins hand truck has a capacity of 500 pounds and will lift this load to 54 inches, tail-gait height. Platform is 22 x 19 inches permitting user to handle large packages. Front of platform is flush with floor. Equipped with eight-inch rubber wheels.

When contacting Clark-Hopkins Equipment Corp., Philadelphia 23, Pa., please mention AMERICAN AVIATION.



"HOT FOOT" for the B-36

In Arctic regions where temperatures often hit 65 degrees below zero, airplanes "freeze up" when engines stop turning over.

To heat up engines and cabins, de-ice wings, control surfaces, landing gear and to free hydraulic lines, AiResearch engineers have designed and built a portable gas turbine powered ground heater—another AiResearch first.

The result of a rush development-production order placed by the Air Force several months ago, the new heater will produce clean 280° air from six different outlets on a -65° day, or 4,000,000 BTU per hour. This is more heat than could be produced from 100 large floor furnaces. It is designed to warm up

a multi-engine B-36 bomber within 15 minutes in sub zero Arctic weather. It will be used to heat living quarters and all types of mechanical ground equipment.

The compact, lightweight AiResearch gas turbine which powers the ground heater is completely self-contained. Developed as a source of pneumatic power for aircraft, its use in the ground heater is an example of its versatility. It is also being used to start jet and turboprop engines, for operating aircraft accessories and for ground air conditioning. It is ideally suited for any condition where self-contained portable power can be used to advantage.

• AiResearch—Specialists in the design and manufacture of equipment involving the use of high-speed wheels—is a leader in the following major categories:

Air Turbine Refrigeration • Cabin Superchargers • Gas Turbines • Pneumatic Power Units • Electronic Temperature Controls
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What does it take to run a leading airline?

"Science!" say United's Operations people, and they talk of electronic aids, over-the-weather flying, and all the other things that contribute to United Air Lines' on-time dependability.

"Service!" say members of the Passenger Service Department. And as a supreme example they point to United chefs. Natives of Switzerland and France, trained in European traditions, they have presided over kitchens of famous restaurants and hotels in many world capitals.

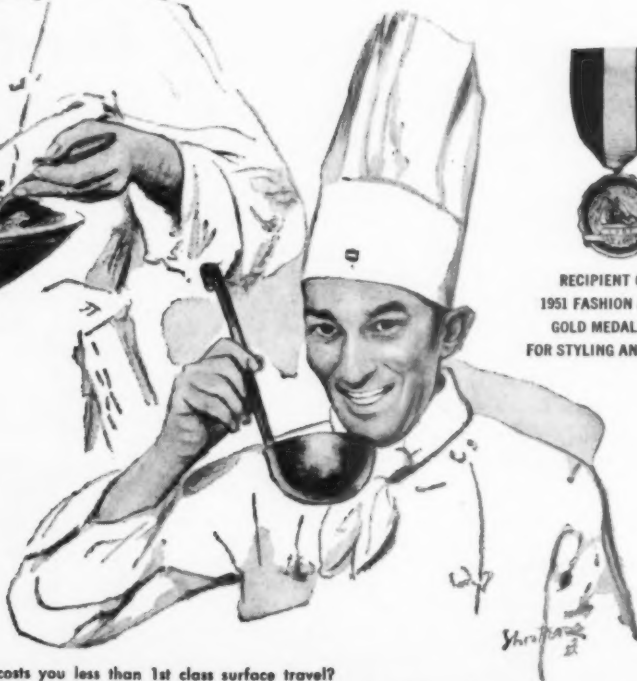
Now, as masters of United's flight kitchens, they offer you their cosmopolitan artistry in the finest meals aloft. No other airline has its own system-wide flight kitchens. No other airline has such chefs!

It takes understanding of human tastes and desires as well as great operating efficiency to achieve United's high standards of service. Chef's salad and pilot's smooth, on-time landing — both signify THE NATION'S NUMBER 1 COAST-TO-COAST AIRLINE.

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1951 FASHION ACADEMY
GOLD MEDAL AWARD
FOR STYLING AND COMFORT



Did you know that going by United Mainliner often costs you less than 1st class surface travel?

For more details and reservations call or write United Air Lines or an Authorized Travel Agent. © U.A.L. 1951

Orient Staff Strengthened:

2-0-2 Withdrawal Cuts NWA System Sales Force

A 23.5% systemwide cut in its sales force has been made by Northwest Airlines because of reduced seat miles available and less schedules following removal of 20 Martin 2-0-2's from service. Move is part of NWA's reduction of expenses to bring them in line with the smaller budget income.

In making the cut from 571 to 437 people, NWA has attempted to keep its basic organizational structure intact so that "a sound foundation may continue to exist upon which we may rebuild without disruption when the time is appropriate," according to **Amos Culbert**, vice president-sales.

Many of the cuts were made domestically, and the sales set-up in the Orient has been strengthened. Here are the major changes:

General Office

Reduction of 23 people. **L. L. Sheets**, agency manager, resigned and his activities have been taken over by **L. B. Kinports**, passenger sales director. There is now a sales department policy committee, composed of all division heads at the general office and regional sales managers. Meetings are held every two weeks, with regional managers attending once a month. Orient sales manager attends every three months.

To carry out policy decisions in day-to-day operations, there is a three-man management committee composed of **J. W. Mariner**, cargo sales director, chairman; Kinports, and **Sam Wyman**, Culbert's administrative assistant. Committee meets almost daily, with full authority to act on all matters.

Europe

London office closed. **R. J. Morgan**, who was in charge, resigned. European matters handled through eastern regional sales office, New York.

Domestic

No change in regional managers—**K. D. McKenzie**, eastern region, New York; **R. D. Collins** central region, Chicago; **G. E. Hatch**, western region, Seattle.

Twin Cities: Minneapolis and St. Paul districts combined. **R. J. Fitzsimmons**, former Twin Cities sales manager, now director of Twin Cities sales district. **Warren LeRoy**, former

New York district sales manager, now Twin Cities district sales manager, reporting to Fitzsimmons. **R. G. Stewart** and **George Knox**, former St. Paul and Minneapolis district sales managers, respectively, both resigned.

New York: **J. J. Fauteux**, formerly dsm Pittsburgh, now dsm New York.

Washington: **John Hanton**, former city sales manager New York, now dsm Washington, succeeding **John Hutchinson**, resigned.

Pittsburgh: **J. Quinn Collins**, former assistant dsm Chicago, now dsm Pittsburgh.

Bismarck: Office closed and **John Landblom** resigned as dsm. Bismarck district combined with Fargo district.

Helena and Missoula: Offices closed, and **M. S. Henderson** resigned as dsm Helena.

Butte: **Harold McGrath** remains as dsm.

Spokane: **Robert Thompson**, former Honolulu sales representative, now



Disposable Mask—Scott Aviation Corp., Lancaster, N. Y., is now marketing the "Econo-Mask," a lightweight oxygen mask constructed of porous paper with an elastic head band and pliofilm re-breather bag. Cost is low enough to permit discarding the mask after one use but it is rugged enough to withstand repeated use in non-public applications. Stowage life equals that of conventional masks. A reusable plastic tube and metal connector are used.

dsm Spokane, succeeding **John Ek-lund**, resigned.

Yakima: **Tom Moore**, former assistant dsm Detroit, now dsm Yakima, replacing **James Lydon**, resigned.

Chicago: **Walt Jorg**, former Seattle sales representative, named assistant dsm.

Detroit: **Jack Keillor**, former Detroit sales representative, now assistant dsm.

Orient

Orient regional sales manager: **J. P. Farrell**, with offices in Tokyo (no change).

Agency and interline manager: **W. J. Bell**, with Tokyo offices (new position).

Country manager, Japan: **L. B. Osborne** (no change).

Tokyo district sales manager: **Joe Sykes**, former Tokyo office manager. Position previously unfilled.

Assistant district sales manager, Tokyo: **Don Trebor**, former Tokyo sales rep. (new position).

City sales manager, Yokohama: To be filled shortly.

Okinawa district sales manager: **Dennis Kelley** (no change).

Taipei district sales manager: To be filled shortly.

Korean district sales manager: **Tom Collins**, former Tokyo sales rep.

Hong Kong district sales manager: **William Hansen**, former dsm Korea, succeeding **Dave Anderson**, resigned (interim appointment, Hansen to be re-assigned in U. S.).

Country manager, Philippines: **R. L. Dudley** (no change).

Manila district sales manager: **Frank Huntley**, former Seattle sales rep. (position previously unfilled). **Manuel Dizon** remains as assistant dsm.

American, TWA to Double Coach Flights

American Airlines and Trans World Airlines will double their transcontinental coach capacity early next month with American operating a new daily DC-6 coach flight via Dallas and TWA a new Constellation flight via St. Louis.

Each line now schedules on daily coach flight between New York, Chicago and Los Angeles.

American's new flight will be added June 3 and will increase its available daily one-way coach capacity from 70 to 140 seats. TWA plans a June 10 inaugural for its extra flight which will increase its capacity one-way from 81 to 162 seats.

For Dallas and St. Louis, new proposals will mean first-time scheduled

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You can
SEE MORE, DO MORE
on a two weeks'
VACATION
when you go
TWA

Luxurious 300-mph TWA Skyliners serve the choice vacation areas of the world. For free folders on low-cost TWA tours, SEE YOUR TRAVEL AGENT or call Trans World Airlines.

Across the U.S. and overseas... you can depend on **TWA**

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Delta points to America's Caribbean Playland

A Bit of Europe at Our Doorstep

DELTA ROUTES
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AIR LINES

Municipal Airport, Atlanta, Ga.

TRAFFIC & SALES

coach service. Fare for New York-Dallas passengers will be \$69 as compared to first-class fare of \$88. For Dallas-Los Angeles passengers, coach fare will be \$62 as compared to \$75.30 for first-class flights.

TWA's proposed coach fare between New York and St. Louis is \$45 against a first-class fare of \$55.40, and its St. Louis-Los Angeles coach fare \$80 against a \$102.95 first-class fare.

Both lines will maintain the present \$110 through fare between New York and Los Angeles via all available routings. Average return is 4½¢ per mile.

Non-Sked Charge Denied

Expansion plans of American and TWA may be viewed as an answer to recent non-scheduled airline charges that certificated carriers were not meeting demands for coach space. But a report submitted by American to the Civil Aeronautics Board refutes the non-sked charges terming them "grossly exaggerated," and indicates that added coach space is part of an over-all capacity expansion program.

To a specific claim by a non-sked attorney that it takes three weeks to get a seat on AA's coach flights, the scheduled line showed:

(1) that only 33 of the 195 coach flights operated in January-March were full;

(2) that during February and March an average of 10 empty coach seats per day was available for sale at departure time both from New York and Los Angeles;

(3) that in Los Angeles confirmed space could be given 97% of the time within six days of departure; 64% of the time two days before; 46% of the time the day before, and 37% of the time on day of departure; and,

(4) in New York confirmed space could be given 95% of the time within 10 days of departure; 60% of the time within a week; and 25% of the time within four days.

1950 AIRLINE SALARIES

Following are 1950 airline salaries as reported to CAB:

Local Service Carriers

Frontier Airlines

(NOTE: Formed May 31, 1950 through merger of Challenger Airlines Co. and Monarch Air Lines, Inc. Schedule E reports for those companies covering part of the calendar year 1950 were published in AMERICAN AVIATION April 30).

H. S. Darr, pres. and dir., \$14,000 salary; C. A. Myhre, exec. v.p. and treas., \$5,833.32; R. M. Wilson, v.p. operations and dir., \$5,833.32; D. A. Duff, v.p. traf-

AMERICAN AVIATION

TRAFFIC & SALES

fic and sales, \$5,833.32; E. N. Levin, secy. and dir., no salary; D. T. Myers, asst. secy., \$1,395; E. W. Sexton, asst. treas., \$2,350.

Southwest Airways

J. H. Connelly, pres. and dir., \$10,-333.34 salary (up \$333.34); T. R. Mitchell, v.p., \$11,333.34 (up \$133.34); A. W. Johnson, treas. and dir., \$10,400 (up \$200); C. H. Sullivan, asst. secy. and counsel, \$8,400; Harry White, dir., \$3,687.47 (up \$3,687.47).

Trans-Texas Airways

R. E. McKaughan, pres. and dir., \$22,-498.08 salary, \$60 bonus and indir.; H. E. Erdmann, v.p. and dir., \$10,000.08, \$60 bonus and indir.; M. L. Muse, secy.-treas., \$6,000 (up \$700), \$60 bonus and indir.

West Coast Airlines

Nick Bez, pres. and dir., \$6,000 salary; H. A. Munter, v.p. and dir., \$12,500 (up \$500); R. A. Duwe, secy. and treas., \$7,-500 (up \$800).

E. W. Wiggins Airways

Joseph Garside, pres. and dir., \$6,400 salary (up \$1,200); Harold E. Shaw, exec. v.p. and treas. and dir., \$7,800; Frederic S. Tobey, clerk, \$5,148; Sven S. Stenberg, asst. treas., \$4,680; Harold E. Martin, asst. treas., \$4,680.

All-Cargo Carriers

Airnews, Inc.

Frank G. Huntress, Jr., pres., treas. and dir., \$2,400 salary; Leroy G. Denman, Jr., secy. and dir., no salary.

The Flying Tiger Line

Robert W. Prescott, pres. and dir., \$18,750 salary (up \$6,250), \$18,000 bonus and indir.; Fred Benninger, secy.-treas., \$13,396 (up \$4,746), \$16,000 bonus and indir.; George T. Cussen, v.p., \$7,475 (up \$475), \$2,500 bonus and indir.; William E. Bartling, v.p., \$7,450 (up \$750), \$9,-600 bonus and indir.; Robert P. Herman, v.p., \$5,413.48; Howard W. Finney, asst. secy.-treas., \$7,042; Norman L. Myers, asst. secy., no salary; Elmer Batzell, asst. secy., no salary; Richard H. Keatinge, asst. secy., no salary; Harlan B. Eldred, member of board, \$1,800 (down \$1,200); T. J. Sullivan, member of board, \$1,800 (up \$1,800).

Slick Airways

Thomas L. Grace, pres. and dir., \$12,-320.05 salary (up \$3,170.05); William E. Hollan, exec. v.p., \$9,764.15; Joseph F. Grant, v.p., secy. and dir., \$10,646.18 (up \$1,826.18); David R. Stewart, v.p., treas. and dir., \$10,646.18 (up \$2,148.68); John W. Walbert, asst. secy., \$5,351.01; William E. Miller, asst. secy., no salary.

U. S. Airlines

G. M. McCleary, pres., no salary; R. W. Starkey, v.p., \$10,000; C. F. Wicks, secy.-treas., \$6,000.

MAY 14, 1951

33 Cities and 16 years...

Thirty-three important cities — from New York to Miami...from New Orleans to Havana, Cuba — lie along the route served by National Airlines, the Airline of the Stars.

In its 16 years of operation, National Airlines has become known for fine equipment, fast flying time, passenger comfort, and courteous service. All of these are provided to the highest degree in National's famed STAR flights — DC-6 Luxury PLUS!



Airline of the Stars

NATIONAL

★ Airlines

More People Than Ever Fly Mid-Continent



throughout Mid-America more people than ever are switching to Air Travel!

The convenience of MCA's daily scheduled flights, the dependability and relaxing travel comfort, are winning new friends for air travel.

Figures prove this, with an increase of more than 6 million passenger miles over 1949...

106,445,570

Passenger Miles Flown in 1950

MID-CONTINENT

AIRLINES



FOR YEARS, THE ACCEPTED
NEW YORK
"HEADQUARTERS"
OF AVIATION EXECUTIVES

Hotel Lexington
LEXINGTON AVENUE AT 48th ST., N. Y. C. 17

HOME OF THE *Hawaiian Room*

DINKLER HOTELS

in ATLANTA

The Dinkler-Ansley

Joe Crocy, Manager

in BIRMINGHAM

The Dinkler-Tutorville

Ira M. Patton, Manager

in NEW ORLEANS

The St. Charles

J. J. ("Mike") O'Leary,
Vice President and Manager

in NASHVILLE

The Andrew Jackson

Leon Wamble, Manager

in MONTGOMERY

The Dinkler-Jefferson Davis

Homer Spiva, Manager

Executive Offices: Atlanta

Carling Dinkler, President
Carling Dinkler, Jr.,
Vice Pres. and Gen. Mgr.

TRAFFIC & SALES

Over the Counter

Sales Promotion

HOW TO SELL and how not to sell is forcefully illustrated in a letter received by American Airlines from a gentleman in Chicago. Seems he had decided to take a Mexican vacation and wanted some information and schedules. According to his letter (which AA prints in full in latest *Flagship News*), he first visited Eastern but "nothing but the sketchiest of sketchy outlines was made." Three trips to AA "and finally everybody was so busy that they had no time to do anything for me." Chicago and Southern "hardly seemed to know that they were making flights in conjunction with other airlines to Mexico City . . ."

Finally, he turned to Braniff, which would only get a Chicago-Dallas haul out of it. Nevertheless, a Mr. Goodloe took over, made out the entire itinerary, handled all reservations and details. "Three times to Eastern, three times to American, and I believe it was three times to Chicago and Southern. And then the airline who would have the shortest haul did the trick.

"The tremendous help that Mr. Goodloe gave me was so in contrast to the indifference of American and the unwillingness of Eastern to put themselves out, and the ignorance of Chicago and Southern."

Indifference, unwillingness and ignorance are certainly three words that have no connection with promoting sales. Sounds like some educational work to be done. Also sounds like Braniff made a friend for life, thanks to heads-up work by Goodloe . . .

Charley Shuff, Eastern's New York traffic and sales manager, tells us he believes he's got a lot of other airline people selling EAL's New York-San Juan service. When EAL opened the route he took the somewhat unusual step of inviting 12 New York traffic and sales managers to San Juan for the weekend (even including Spence Garret of Pan American!). What better way to familiarize them with the service?

Timetables

HAVE YOU NOTICED American Airlines' schedules in the May issue of *Official Airline Guide*, and the company's latest timetable. A letter from Herb Ford, AA's Washington district sales manager, explains as follows:

"This letter might well be titled either 'Man Bites Dog' or 'No Spots before your eyes on American.'"

"Man Bites Dog" because here is someone in the sales department writing about someone in the public relations department—namely Frank Brunton—instead of vice versa.

"No spots before your eyes on American" because some months ago Frank Brunton asked the question, 'Why do you fill a timetable up with dots in the columns where there is no service? Wouldn't it look better if those columns were left blank?'

"Experimentally, some of the columns were 'whited out.' It looked good and the full result is the Apr. 29, 1951, American Airlines timetable issue. Compare the American Airlines section of the May *Official Airline Guide* with other sections and notice how clear it appears and how much easier to read."

What do you think? A new trend in timetables?

Traffic and Services

EL AL Israel National Airlines on May 1 started twice-weekly New York-Lydda

Constellation service . . . Eastern Air Lines' New York-San Juan non-stop is serving New York area through Newark Airport to lessen congestion at LaGuardia . . . EAL has started daily non-stop Constellation service New York-Houston and one-stop service to San Antonio . . . United Air Lines inaugurated excursion flights between Seattle/Tacoma and Vancouver, three daily round-trips with 28-passenger DC-3's. Tickets valid for 15 days costs \$11.25 plus tax against \$15.20 regular . . .

Avianca, Colombian national airline, has transferred New York operations from LaGuardia to New York International Airport. Company is flying New York-Bogota three times weekly . . . Ozark Airlines starts service May 15 at East St. Louis, Ill., through Lambert Field, St. Louis . . .

Ticket Offices

AMERICAN Airlines and Delta have opened a new combined ticket office in the Farragut Hotel, Knoxville . . . El Al Israel National Airlines has new ticket office and passenger lounge at 37 W. 57th St., New York . . .

—ERIC BRAMLEY

AMERICAN AVIATION



Another PESCO FIRST...the Unloading Gear Pump ...flies with SAAB at transonic speeds

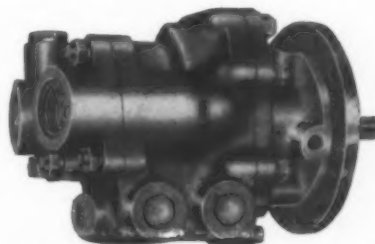
Lighter weight . . . longer service life . . . lower maintenance expense . . . smaller initial cost . . . four good reasons why Pesco's new unloading gear-type hydraulic pump is rapidly replacing conventional variable volume pumps on aircraft . . . particularly jets.

Among the first to take advantage of the many benefits of Pesco's latest contribution to more efficient, more dependable aircraft operation is the famous Swedish SAAB Aircraft Company. Its new SAAB-29, designed to fly at speeds up to the transonic speed range, depends on the Pesco Unloading Gear Pump for all hydraulic operations including landing gear, wing flap, brake operation, etc.

Always alert to the demands of aircraft makers for reductions in weight, elimination of service and maintenance problems, and lower costs, Pesco research engineers are continually

searching for ways to improve present equipment as well as develop new products to meet these important requirements.

It is this constant research that keeps Pesco aviation products standard equipment on military and commercial aircraft. If you have a problem in aircraft hydraulics or fuel handling, perhaps this experience can help you. A Pesco engineer will gladly discuss your problem with you . . . without obligation, of course.



Pesco Model 011799 Unloading Gear Pump. Weight 8.6 lbs. Maximum continuous operating pressure 1500 p.s.i. Capacity 2 g.p.m. at 1500 r.p.m. Features Pesco's exclusive, patented "Pressure Loading" principle. Other models available for pressures to 3000 p.s.i.



BORG-WARNER CORPORATION
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U. S. Feeder Airline Revenues & Expenses for Calendar 1950

AIRES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
All American	\$ 2,933,614	\$ 1,290,529	\$ 1,575,209	\$ 47,757	.....	\$ 5,510	\$ 3,150	\$ 3,245,869	\$ 1,603,014	\$ 1,642,855	\$ -312,255
Bonanza	796,007	262,492	516,572	810	4,876	2,056	8,525	852,625	364,599	488,026	-56,618
Central	719,735	74,343	636,334	.....	.....	489	5,552	775,047	343,391	431,656	-55,312
Challenger*	437,442	116,110	312,235	2,224	4,783	837	752	500,433	239,425	261,008	-62,990
Empire	1,001,554	369,962	603,186	5,833	.....	2,193	14,294	977,476	522,310	455,166	24,078
Frontier*	2,120,713	642,907	1,416,537	14,732	27,726	4,585	10,494	2,210,690	1,061,647	1,149,043	-89,977
Lake Central**	845,888	119,238	409,067	15,972	.....	680	300,254	820,116	459,688	360,428	25,771
NCA***	199,645	106,078	84,148	2,876	3,519	527	2,180	206,543	75,310	131,234	-4,897
Mid-West	610,121	47,996	562,051	.....	.....	290	36	576,047	294,595	281,542	34,074
Norfolk*	651,916	154,108	475,549	2,908	11,190	741	4,782	674,040	352,081	321,958	-22,124
Ozark****	159,937	34,581	121,651	2,350	.....	152	.....	305,336	150,718	154,617	-145,398
Piedmont	3,104,596	1,531,327	1,478,886	29,572	37,552	13,421	6,905	2,830,377	1,582,642	1,247,735	274,220
Pioneer	3,335,140	1,793,060	1,279,648	17,657	41,240	12,998	162,999	3,106,861	1,502,633	1,604,228	228,779
Robinson	1,192,206	584,184	564,132	18,687	11,712	1,960	8,801	1,207,920	632,212	575,707	-15,714
Southern	1,762,917	360,787	1,374,063	14,670	.....	1,902	3,630	1,646,370	858,387	787,983	116,546
Southwest	2,213,745	1,139,969	943,888	18,877	43,925	4,056	41,898	1,952,668	824,016	1,128,652	261,077
Trans-Texas	2,496,803	675,450	1,777,483	10,554	18,688	3,715	7,436	2,354,594	1,114,599	1,240,285	142,209
West Coast	1,279,254	555,068	688,538	6,086	6,635	1,446	8,586	1,174,902	531,227	643,675	98,352
Wiggins	247,137	17,793	228,854	.....	.....	57	433	256,414	120,477	135,937	-9,276
Wis. Central	1,806,432	427,378	1,355,145	18,637	.....	2,419	.....	1,642,416	821,055	821,361	164,016
TOTALS	27,908,802	10,302,960	16,400,176	230,201	211,846	60,034	590,707	27,316,744	13,453,646	13,863,096	592,061
HAS	371,484	.....	371,423	.....	.....	.....	.....	329,616	187,352	142,265	41,868
Los Angeles	424,409	.....	419,852	.....	.....	.....	.....	402,868	257,784	145,084	21,541

* Figures for Challenger Airlines and Norfolk Air Lines are through May 31, 1950 only. Companies merged and began operating under the name of Frontier Airlines, Inc. on June 1, 1950.
 ** Formerly Turner Airlines.
 *** Figures cover feeder segment (route 126) awarded NCA by CAB in the Parks Air Lines Investigation Case.
 **** began operations September 26, 1950.

U. S. All-Cargo Airline Operations, Oct.-Dec., 1950

TRAFFIC							REVENUES & EXPENSES						
AIRLINES	FREIGHT TON-MILES	AVAILABLE TON-MILES	% AVAILABLE TON-MILES	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES	TOTAL OPERATING REVENUES	FREIGHT REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
October, 1950													
Airnews	33,215	101,514	32.72	29,439	29,004	100.00	\$ 18,225	\$ 17,124	\$ 258	\$ 15,806	\$ 13,187	\$ 2,619	\$ 2,419
Fly. Tiger	2,072,048	2,576,052	80.44	398,208	294,933	100.00	\$ 534,984	\$ 295,411	\$ 24,016	\$ 312,553	\$ 183,525	\$ 129,028	\$ 222,430
Slick	5,463,750	6,300,070	86.73	1,041,815	707,596	92.69	\$ 809,910	\$ 574,385	\$ 191,094	\$ 636,727	\$ 389,298	\$ 247,429	\$ 173,183
US Airlines	346,841	684,020	50.71	99,064	109,924	97.90	\$ 48,133	\$ 40,218	\$ 7,645	\$ 91,920	\$ 60,980	\$ 30,940	\$ -43,787
TOTALS	7,915,854	9,661,656	81.93	1,568,526	1,411,457	95.44	\$ 1,411,252	\$ 927,138	\$ 223,013	\$ 1,057,006	\$ 646,990	\$ 410,016	\$ 354,245
November, 1950													
Airnews	31,859	99,666	31.97	29,076	28,476	100.00	\$ 18,400	\$ 16,430	\$ 344	\$ 17,200	\$ 14,556	\$ 2,644	\$ 1,200
Fly. Tiger	2,086,316	2,502,944	83.35	388,874	294,933	100.00	\$ 449,667	\$ 285,242	\$ 32,997	\$ 315,867	\$ 172,841	\$ 143,026	\$ 133,800
Slick	5,400,233	6,232,564	86.65	1,048,268	758,898	86.67	\$ 772,994	\$ 579,128	\$ 163,149	\$ 645,603	\$ 381,176	\$ 264,427	\$ 127,391
US Airlines	397,754	814,786	48.82	127,058	135,886	75.51	\$ 65,356	\$ 50,333	\$ 14,874	\$ 92,613	\$ 61,464	\$ 31,149	\$ -27,258
TOTALS	7,916,162	9,649,960	82.44	1,593,276	1,218,193	88.96	\$ 1,306,417	\$ 931,133	\$ 211,364	\$ 1,072,283	\$ 630,037	\$ 441,246	\$ 235,133
December, 1950													
Airnews	31,855	101,395	31.42	29,430	29,430	100.00	Under CAB regulations the airlines are not required to file a report for revenues and expenses for the month of December, but instead file a statement for the quarter ending December 31, 1950.						
Fly. Tiger	2,714,841	3,218,516	85.81	497,841	294,933	100.00							
Slick	5,679,720	6,188,065	92.08	1,023,109	750,717	78.54							
US Airlines	537,434	822,521	65.34	149,539	133,560	63.30							
TOTALS	8,963,850	10,330,497	86.77	1,699,919	1,208,640	82.61							
Quarter Ending December 31, 1950													
Airnews	96,929	302,575	32.03	87,945	86,910	100.00	\$ 54,093	\$ 50,205	\$ 763	\$ 53,752	\$ 43,913	\$ 9,839	\$ 1,151
Fly. Tiger*	6,873,205	8,297,512	82.83	1,284,923	884,799	100.00	\$ 1,476,379	\$ 940,795	\$ 102,543	\$ 985,466	\$ 582,654	\$ 402,812	\$ 490,913
Slick	16,543,703	18,720,699	88.37	3,113,192	2,217,211	85.84	\$ 2,186,469	\$ 1,713,684	\$ 566,127	\$ 2,036,703	\$ 1,166,806	\$ 867,897	\$ 169,766
US Airlines	1,282,029	2,321,327	55.23	375,661	379,370	78.22	\$ 177,492	\$ 125,944	\$ 51,005	\$ 369,055	\$ 196,211	\$ 172,844	\$ -191,563
TOTALS	24,795,866	29,642,113	83.64	4,861,721	3,568,290	88.87	\$ 3,894,433	\$ 2,830,628	\$ 720,438	\$ 3,444,976	\$ 1,991,584	\$ 1,453,392	\$ 450,267
* Figures for the Flying Tiger Line do not include the company's defense contract operations.													

* Figures for the Flying Tiger Line do not include the company's defense contract operations.

U. S. All-Cargo Airline Operations, 1950

	TRAFFIC						REVENUES & EXPENSES							
	AIRLINES	FREIGHT TON-MILES	AVAILABLE TON-MILES	% AVAILABLE TON-MILES	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES	SCHEDULED TOTAL OPERATING REVENUES	FREIGHT REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
Airnews Fly. Tiger*	471,092 21,435,309	1,166,138 28,076,249	40.39 76.34	340,969 4,013,541	352,974 3,516,576	96.17 92.26	\$ 232,574 4,809,573	\$ 223,981 2,934,409	\$ 763 374,152	\$ 189,933 3,343,056	\$ 156,188 2,017,749	\$ 33,745 1,325,308	\$ 42,641 1,666,517	
Slick US Airlines	45,612,474 3,896,585	56,701,841 6,897,397	80.44 56.48	9,676,398 1,248,432	8,342,637 1,295,730	84.58 87.41	6,756,652 561,371	5,291,320 362,225	1,245,056 194,809	6,215,399 1,044,918	3,438,916 597,546	2,776,483 444,372	541,252 -480,547	
TOTALS	71,415,460	92,841,625	76.92	15,279,340	13,507,917	87.15	12,360,170	8,811,935	1,814,780	10,790,306	6,210,399	4,579,908	1,569,863	
* Figures for the Flying Tiger Line do not include defense contract operations.														

* Figures for the Flying Tiger Line do not include defense contract operations.

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With magnetic attraction Latin America has seized the interest of the Who's Who in commerce and the smart-set vacation crowd. It's today's land of business opportunity—a vast market—a great source of supply. It's today's greatest playland, too, where ancient civilizations rub elbows with the ultra-modern, where historic landmarks contrast with elegant hotels, smart shops and gay casinos. Now, as never before, those in the know have discovered there's business to be done, there's more pleasure and fun—in Latin America. Yes, all eyes are on Latin America.

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U. S. Domestic Airlines Revenues & Expenses, 1950

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
American	\$ 114,653,557	\$ 97,101,528	\$ 5,916,510	\$ 2,575,344	\$ 6,966,987	\$ 1,141,285	\$ 299,333	\$ 91,734,730	\$ 44,174,639	\$ 47,560,091	\$ 22,918,827
Branchiff	15,702,258	12,409,384	2,193,719	349,663	409,087	122,783	161,553	13,597,855	6,251,485	7,346,370	2,104,404
Capital	29,816,460	22,179,403	3,816,875	786,050	1,547,848	162,408	943,060	27,579,706	12,762,051	14,817,655	2,236,753
Caribbean	872,835	546,821	252,528		28,735	4,111	7,714	837,571	360,353	477,218	35,265
C & S	9,146,331	6,796,233	1,747,320	251,878	216,459	72,946	22,622	8,442,261	3,391,116	5,051,146	704,070
Colonial	4,176,994	2,899,095	1,143,487	33,954	42,970	22,107	7,528	4,562,259	2,091,998	2,470,261	-385,664
Continental	6,221,793	4,100,018	1,729,247	45,178	124,875	33,903	109,816	5,837,886	2,721,084	3,116,802	383,907
Delta	18,869,918	15,595,831	1,770,067	325,437	586,733	210,166	269,222	16,718,084	8,250,887	8,467,197	2,151,833
Eastern	77,416,194	69,084,327	3,372,004	1,556,347	1,873,263	1,109,713	257,343	67,914,584	36,114,818	31,799,765	9,501,610
Hawaiian	3,492,055	2,903,928	32,733	122,198	249,768	73,668	96,663	3,497,715	1,374,630	2,123,085	-5,660
Inland**	3,064,515	2,255,297	715,612	25,483	39,892	23,585	849	2,584,139	1,153,574	1,430,565	480,376
MCA**	8,038,745	5,950,468	1,658,714	85,630	121,691	53,359	129,585	7,350,464	3,137,593	4,212,872	688,281
National	16,948,674	13,413,718	1,747,962	216,058	476,849	254,980	668,574	14,479,037	7,219,676	7,259,361	2,469,637
Northeast	6,360,546	4,440,034	1,519,268	80,583	109,055	22,893	24,218	6,240,008	2,990,384	3,249,624	120,537
Northwest	33,619,236	26,414,235	4,411,310	732,204	1,307,725	194,411	89,329	36,514,162	19,923,748	16,590,414	-2,894,925
Trans Pacific	848,174	654,006	• • • • •	2,557	10,201	8,506	152,553	950,770	388,154	562,616	-102,596
TWA	93,183,599	60,889,741	5,853,250	2,225,847	2,666,529	664,377	559,089	66,494,315	33,892,322	32,601,994	6,686,083
United	75,711,415	77,959,299	7,341,612	3,112,373	5,043,216	781,454	734,637	81,493,596	36,419,342	45,074,054	14,218,019
Western*	11,181,979	8,609,782	1,374,420	168,678	164,567	60,059	729,709	9,995,095	4,742,664	5,252,431	1,186,884
TOTALS	529,321,678	434,203,148	46,596,638	12,693,662	21,986,450	5,016,712	5,261,597	466,824,037	227,360,518	239,463,521	62,497,641

* Operations of Western and its subsidiary, Inland, should be considered as consolidated, although reports are filed separately as shown here.
 ** Figures do not include operations of feeder segment (route 105) awarded MCA by CAB in the Parks Air Lines Investigation Case. Figures for route 105 are carried separately on feeder airlines summary sheets.
 *** Additional mail pay compensation of \$1,953,183 for previous periods not reflected in operating statistics.

U. S. Domestic Airlines Revenues & Expenses, Oct.-Dec., 1950

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
American	\$ 32,693,338	\$ 27,236,158	\$ 1,839,576	\$ 949,164	\$ 2,071,745	\$ 276,473	\$ 81,332	\$ 23,708,428	\$ 11,111,644	\$ 12,596,784	\$ 8,984,910
Branchiff	4,200,149	3,321,256	509,203	112,684	120,709	23,589	32,727	3,476,726	1,575,305	1,899,420	725,423
Capital	8,329,177	6,246,766	895,376	237,774	405,565	40,765	33,239	7,684,578	3,687,467	3,997,111	704,938
Caribbean	252,930	121,456	117,660		6,191	1,035	1,045	202,123	116,474	85,649	50,857
C & S	2,595,345	2,011,633	337,963	95,696	72,506	13,024	2,273	2,327,140	906,970	1,420,171	269,205
Colonial	1,062,743	733,237	298,745	9,959	10,769	4,125	2,615	1,127,326	512,587	614,739	-64,584
Continental	1,708,369	1,150,112	412,615	15,529	37,561	7,965	56,417	1,524,078	730,169	793,909	184,291
Delta	4,919,398	4,078,004	359,935	103,020	131,707	48,889	121,945	4,341,763	2,174,462	2,167,306	577,631
Eastern	19,891,346	17,703,471	991,781	527,242	277,700	272,828	71,116	16,008,336	7,651,697	8,356,640	3,383,010
Hawaiian	775,374	642,555	8,720	32,794	69,210	14,423	2,335	388,039	341,056	546,983	-112,665
Inland**	743,499	535,101	182,911	9,388	9,206	5,149	562	667,275	294,425	372,850	76,224
MCA**	2,112,956	1,559,399	402,773	23,549	35,601	12,458	70,509	1,835,611	843,078	992,533	227,246
National	4,661,061	3,532,042	436,904	27,601	199,011	85,469	336,419	3,863,630	1,876,846	1,986,785	779,440
Northeast	1,590,644	1,072,763	404,524	26,249	30,003	1,347	9,893	1,557,887	711,369	846,517	-7,243
Northwest***	9,127,242	5,875,474	2,219,813	241,842	389,670	35,861	32,501	8,042,409	4,862,303	3,180,107	1,034,832
Trans Pacific	223,012	169,690	• • • • •	1,186	2,744	2,048	43,239	276,528	110,106	166,422	-53,516
TWA	20,421,188	16,567,062	1,703,357	790,415	328,113	165,367	274,720	18,820,512	9,955,997	8,864,515	1,600,676
United	25,618,010	20,049,199	2,216,886	1,131,922	1,453,772	191,405	348,179	20,620,390	9,211,943	11,408,447	4,997,620
Western*	2,711,511	2,242,679	279,431	43,445	47,683	13,264	63,049	2,487,016	1,115,175	1,371,841	224,495
TOTALS	143,597,342	114,852,057	13,658,173	4,379,459	6,249,466	1,225,680	1,984,125	119,447,790	58,433,016	61,014,776	24,249,550

* Operations of Western and its subsidiary, Inland, should be considered as consolidated, although reports are filed separately as shown here.
 ** Figures do not include operations of feeder segment (route 105) awarded MCA by CAB in the Parks Air Lines Investigation Case. Figures for route 105 are carried separately on feeder airlines summary sheets.
 *** Additional mail pay compensation of \$1,953,183 for previous periods not reflected in operating statistics.

U. S. Feeder Airline Revenues & Expenses, January, 1951

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
All American	\$ 217,829	\$ 89,008	\$ 122,675	\$ 4,784	\$ • • •	\$ 371	\$ • • •	\$ 277,896	\$ 124,526	\$ 153,370	\$ -60,067
Bonanza	63,713	25,972	36,665	38	339	362	326	73,714	30,471	43,243	-10,001
Central	81,671	14,837	66,252	• • •	• • •	• • •	204	108,133	46,109	62,024	-26,463
Empire	81,719	26,976	53,546	839	• • •	187	115	89,448	47,908	41,540	-7,729
Frontier	296,647	81,886	199,650	1,480	4,093	507	8,544	321,015	154,698	166,317	-24,368
Lake Central	143,765	15,286	35,024	3,590	• • •	60	89,805	121,439	73,706	47,733	22,326
MCA*	64,413	34,985	27,627	1,104	443	177	• • •	73,411	27,090	46,321	-3,997
MIA-West	35,973	1,328	34,549	• • •	• • •	9	79	39,129	17,273	21,856	-3,156
Omair	77,278	14,328	60,633	1,400	• • •	76	839	121,552	65,059	76,043	-64,274
Piedmont	261,101	138,844	109,907	2,500	2,361	1,241	5,292	245,156	127,193	117,963	15,945
Pioneer	283,092	154,120	100,361	1,773	2,832	1,164	2,609	247,084	110,565	136,519	36,008
Robinson	104,436	50,228	49,277	2,016	1,606	234	861	119,371	58,840	60,531	-14,935
Southern	150,791	47,129	100,406	1,451	• • •	268	967	193,999	101,578	92,421	-43,207
Southwest	184,333	90,038	86,362	1,043	3,555	342	1,619	178,191	71,580	106,611	6,142
Trans-Texas	220,564	61,081	140,611	1,133	1,707	228	13,100	197,336	90,780	106,556	23,228
West Coast	98,494	29,148	67,380	380	712	91	• • •	88,786	36,036	52,750	9,707
Wiggins	26,559	1,351	25,110	• • •	• • •	• • •	88	27,088	12,569	14,519	-529
Wia, Central	142,027	29,959	110,551	1,300	• • •	180	• • •	136,468	63,116	73,352	5,560
TOTALS	2,534,405	906,502	1,426,583	24,831	17,648	5,497	124,448	2,679,216	1,259,547	1,419,669	-144,810
Hel. Air Service	28,914	• • • • •	28,909	• • •	• • •	• • •	• • •	33,041	21,193	11,848	-4,126
Los Angeles	38,374	• • • • •	38,374	• • •	• • •	• • •	• • •	32,016	18,018	13,998	6,357

* Figures cover feeder segment awarded MCA by CAB in the Parks Air Lines Investigation Case.

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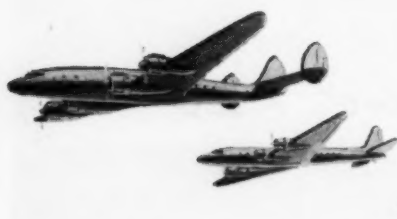
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ADMINISTRATIVE

Otto A. Seyferth, Muskegon (Mich.) industrialist and president of the Chamber of Commerce of the United States, has been elected to the board of directors of Capital Airlines. Also added to the board was **Robert J. Wilson**, vice president—personnel and properties.

A. D. Piepgras, formerly assistant treasurer of Northwest Airlines in Tokyo, has been promoted to executive assistant to **D. J. King**, regional vice president, Orient.

W. G. Townley has been promoted from general manager of operations to executive assistant to the president of Canadian Pacific Air Lines.

Arthur Kaye has been appointed supervisor of industrial deferment for American Airlines, a post he formerly held with Eastern Air Lines. He served with the New York City selective service headquarters during World War II.

OPERATIONS-MAINTENANCE

Ralph E. Geror, who resigned recently as assistant to the vice president in charge of operations, engineering and maintenance for Northwest Airlines, has been appointed executive vice president and general manager of the Arlington Corp., St. Paul tool and die manufacturers.

G. I. Myers has been named special assistant to **W. J. Addams**, United Air Lines manager of flight operations. Myers entered commercial aviation in 1927 as pilot for Pacific Air Transport, a UAL predecessor company. He managed United's flight training center at Denver before going on a two-year tour of duty with the company's Mexican subsidiary, LAMSA, in 1948.

Robert Wade, Jr., a staff engineer for Pan American World Airways at Miami, has been named maintenance superintendent for Aerovias Venezolanas, a PAA affiliate, with headquarters at Maiquetia Airport, near Caracas.

E. E. Harlow has been appointed supervisor, P&C training, for American Airlines at Los Angeles. He has been personal representative in the region for the past year.

Hector J. Morrow, for the past two years a cost and requirements specialist at Northwest Airlines' general offices, has been appointed station manager in Winnipeg.

Stanley P. French, formerly in the schedules department of Trans World Airlines in New York City, has joined All American Airways as director of schedules and tariffs.

Airline Commentary

By Eric Bramley



HERE'S a human interest story connected with AMERICAN AVIATION'S naming of the five top pilots of 1950 in its recent 2d Annual Air Transport Progress Issue. Three of the winners were Brig. Gen. **Henry C. Kristofferson**, of Pan American World Airways; Col. **F. W. ("Frenchy") Williams**, personal pilot for President Truman, and **F. J. ("Fritz") Schwaemmle**, assistant to Delta Air Lines' general sales manager (former Delta pilot, grounded by eye trouble, who has done an outstanding job for the company by giving illustrated talks on airline dependability).

These pilots didn't know they were to receive the awards. But it turns out that they're the closest of friends. Letters from Williams and Schwaemmle reveal that the two of them were in charge of the Air Transport Command operation at Marrakech, French Morocco, in 1943-44 (we're told that Schwaemmle's careful briefings of B-26 pilots flying from Africa to England saved many a life). When Kristofferson took over North Atlantic Division operations in 1944, he called them to Casablanca, where they worked and lived together. Later, when Kris took over ATC operations in Washington, they went with him. Also, coincidentally, Kris and Frenchy went through flying school together at March and Kelly Fields and served together at Luke Field, Hawaii, for two years after graduation.

It's unlikely that it'll ever happen again—that three out of five winners of an award involving thousands of pilots would be such close friends.

In case you don't know about the drinking habits of air travelers, we're about to enlighten you. Bourbon drinkers outrank all others, according to the 1950 records of Northwest Airlines for drinks served (cash sales) on its Stratocruisers. Out of 108,000 drinks sold, here's the approximate line-up:

Bourbon	54,200	Martinis	6,500
Scotch	43,200	Manhattans	4,100

How about a break-down from some of the other drink-servers like Pan American, National, etc.?

You've heard the old saying that there's nothing more useless to an airline than an airplane on the ground—they only make money when they're flying. **Bob Smith**, president of Pioneer Air Lines, expressed it to us recently in a new and different way: "An airplane is like your mother-in-law—no good on earth."

We think somebody's taking a great advantage of us, but we've been threatened with all sorts of dire things if we don't publish the news that Robert L. Froman, the popular assistant director of CAB's bureau of safety regulation, is now known as "Hadacol Froman." We hope A. B. Curry, Miami's aviation director, is duly satisfied, and now can we get back on your airport, A.B.?

A few issues ago we asked whether a 750-lb. man who is so large that he needs two seats can travel for one fare. We've received some interesting replies, both pro and con. Here are three of them:

Len Morgan, second officer for Braniff Airways, says he heard a 600-lb. wrestler request space on an airline and that the airline "was quick to snap up the chance for publicity and sold him one ticket for two seats after checking . . . to determine if a DC-3 floor would safely hold him." **W. A. Weeks**, tariff manager for Eastern Air Lines, says the "situation has actually occurred of our being required to transport such a passenger. Passenger fares are not predicated upon the weight of a passenger . . . The fact that a man weighs 750 lbs. and requires two seats . . . does not give us any right to charge any more than the passenger weighing 100 lbs." **John Fernandez**, of Pan American World Airways in San Juan, dissents. He points out that when a stretcher blocks out another seat, the stretcher passenger must pay another fare. "I would gather from this that one seat and only one is allotted each fare . . . I feel that in the case of a full load one would have a heck of a time endeavoring to off-load a confirmed passenger because your 750-lb. passenger requires two seats while only paying for one." Anyone care to add an opinion?

Headquarters



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Clarence Haas has been appointed Philippine Air Lines' operations representative for the European region, succeeding C. E. Bonaudi, recently reassigned as PAL's operations representative at Honolulu.

D. L. McDaniel has been named manager of technical training at United Air Lines' San Francisco maintenance base, succeeding W. P. Herriott, recently promoted to assistant personnel manager for the San Francisco district. Herriott, a 20-year UAL veteran, had been technical training manager at SF since 1946. McDaniel joined United in 1929 as an instructor at the Boeing School of Aeronautics.

George A. Allen has been promoted from assistant manager of Pioneer Air Lines' Dallas station to manager of the Fort Worth office. He replaces John W. Hope, recalled to active duty with the USAF.

TRAFFIC & SALES

Frederick S. (Stan) Cowan, formerly manager of traffic administration for Capital Airlines, has been named general traffic manager. Except for wartime service, he has been in the airline industry since 1929 and with Capital since 1946.

Durward T. Cook has been appointed district sales manager for Frontier Airlines in Salt Lake City, filling the vacancy created by transfer of John D. Lindsay to Denver as passenger sales manager. Cook served with Western Air Lines and Transocean Air Lines before joining Challenger Airlines, a Frontier predecessor company, two years ago.

John Reagan has been appointed acting district sales manager for United Air Lines at Milwaukee, succeeding K. E. Knapp, resigned. He was with the Northern Pacific Railroad and Northwest Airlines before joining UAL in 1948.

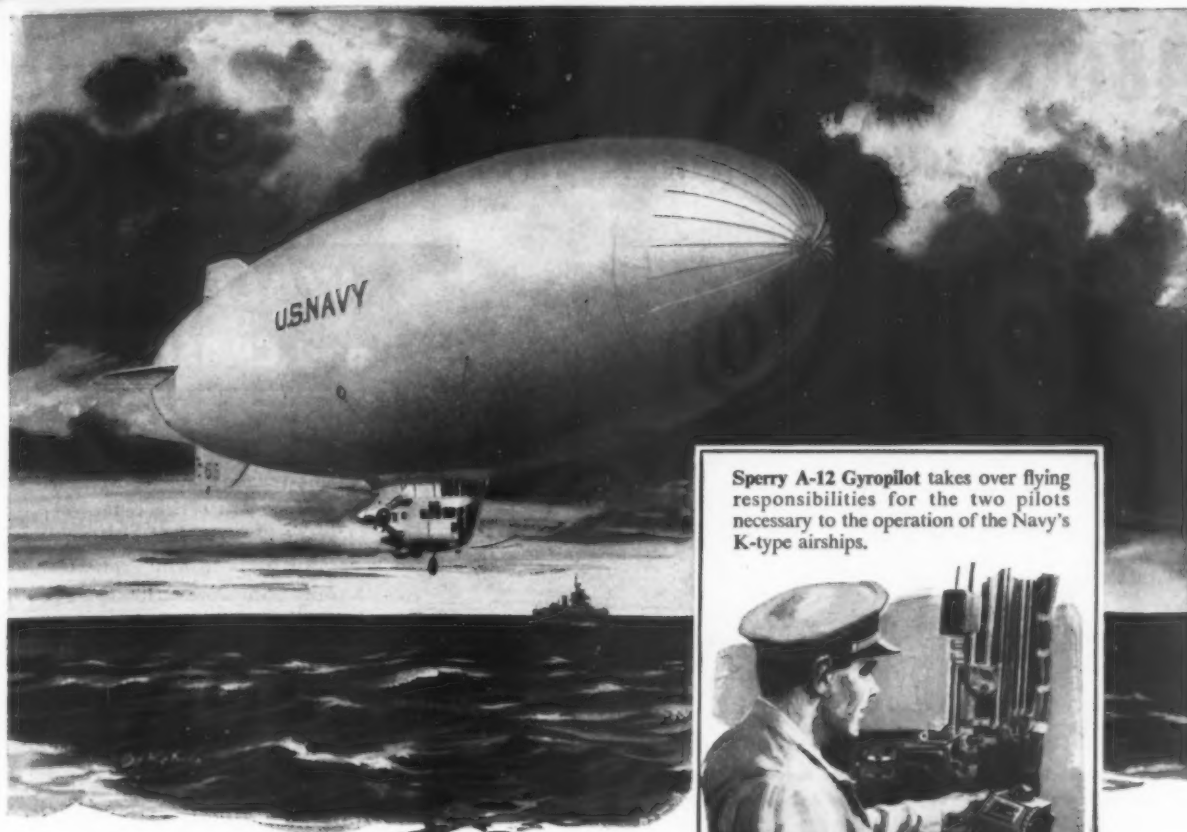
Larry F. Smalls, associated with American Airlines for the past ten years, has been appointed agency representative for Swissair in New York.

E. R. McDonald, formerly assistant sales manager for Frontier Airlines in Arizona, has been appointed as district sales manager in Billings, Montana.

James P. Curran has been appointed New York reservations supervisor for Swissair, and Werner N. Brandis has been named as reservations representative. Curran formerly was with Air France and United Air Lines, and Brandis with the American Express Co. Pierre S. Rhein, formerly with Thomas Cook & Son at San Francisco, has been named west coast representative for the Swiss national airline.

John Howard Day has been appointed traffic manager for Pacific Northern Airlines at Cordova, Alaska, replacing Clarence T. Perry, resigned.

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Airline-Airport Give and Take...

... Basis for Solving Two-Sided Problems

By KEITH SAUNDERS

MEANS whereby airline officials and airport operators can improve their relationships with no harm to either group were suggested by Sidney A. Stewart, president of Chicago and Southern Air Lines, in a speech before the annual conference of the Airport Operators Council in Memphis.

Assigned the controversial subject of how to achieve better airline-airport relations, the C & S official criticized both parties for certain past and present practices, but voiced the opinion that:

"If we both realize that there are two sides to the problem and go into negotiations with the determination that we will find solutions, we will have gone quite a long way towards solving this problem."

One of the basic problems of the airports is to get more money out of the airlines, and one of the basic problems of the airlines is to keep its airport use fees as low as possible, he declared, and mutual recognition of these facts and cooperation on the part of both parties will make the going less difficult for all.

Airlines' Mistakes

Admitting that the airlines do not know all the answers on the operation of airports, and have rammed provisions down the airports' throats that have served no useful purpose other than to inflate some airline negotiators' egos, Stewart said:

"I hope we are not so guilty of this as we once were, and I know that in many cases we are now voluntarily sitting down with the airports to amend long-term leases and put our relationships on a more reasonable basis."

The speaker said there is "no excuse" for the clauses in some airline leases which not only give the airlines the right to designate the limousine operator but also give them complete control over ground transports. All the airlines are entitled to, he said, is language guaranteeing that their passengers will get good ground service at a reasonable cost, and the basic responsibility for doing this should remain with the airport operator.

Stewart said the airlines are now trying to work things out at a number of cities so as to amend old leases and not only restore to the airports their rightful function of control over



Handshake—Sidney A. Stewart (left), president of Chicago and Southern Air Lines, clasps the hand of A. B. Curry, president of the Airport Operators Council, at the recent AOC meeting in Memphis, symbolizing the growing appreciation of the importance of cooperation between airline and airport people.

ground transportation but also to permit the airports to pick up extra revenue from limousine passengers.

In a lot of cases, the airline official pointed out, the airlines have delayed lease discussion by belaboring minor points and in other cases have tried to be too literal in the interpretation of contracts without due regard to the intent.

On the credit side, he pointed out, the airlines have not required too much persuasion to give in on re-

negotiation of leases where they had airport managements "over the barrel on rental rates that could be charged in proposed new terminal buildings." Because of rising construction costs, such terminals, probably could not be built unless rates could be increased, he noted.

Airport Faults

Airport operators have been guilty of mistakes, also, Stewart observed, among these being:

1. Failure to be passenger-conscious, and to provide clean and adequate facilities for the airline passengers who constitute the main source of revenue for large airports.

"The airport terminal is a sales room for our combined products, and good housekeeping is very important," he said.

2. Failure to be publicity-conscious, and to fully realize what they have to sell to the public.

"Facts can be assembled which will point out to the average citizen the benefit he is deriving from the airport, and I believe the airport management has the responsibility of pointing out these facts. It seems to me that an airport which has a good restaurant and other public facilities can, by advertising, stimulate the use of the airport and increase the revenues both directly from concessions and indirectly from airline passengers."

3. Reluctance to discuss their cost

Curry, Betsworth Head Airport Groups

The Airport Operators Council and the American Association of Airport Executives held their annual meetings in late April at Memphis and Minneapolis, respectively, electing officers as follows:

AOC—A. B. Curry, Miami, re-elected president; Louis R. Inwood, Kansas City, elected first vice president; J. W. Reeves, Jr., Los Angeles, second vice president; Leander I. Shelley, re-elected general counsel; and C. C. Thompson, re-elected executive secretary. Directors elected were: Fred M. Glass, Port of New York Authority; Edward H. McGrath, Massachusetts State Airport Management Board, and George Treadwell, Port of Seattle.

AAAE—Walter Betsworth, Waterloo, Ia., president; Cecil Meadows, Bakersfield, Calif., first vice president; Francis A. (Jack) Bolton, Columbus, O., 2d v.p.; Robert Aldrich, Minneapolis-St. Paul, 3d v.p.; Melvin H. Nuss, Reading, Pa., secretary-treasurer. New directors are: John E. Casey, Chicago; Paul B. Koonce, Houston; Robert P. Neblett, Jackson, Miss., and Richard T. Aderhold, Jr., Atlanta.

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Serves United's Latest Type of Plane



ON April 5th, United Air Lines completed its 25th year of operation. In a quarter of a century of pioneering in the development of air travel, United has expanded its airways from 460 to 13,250 miles; its personnel from 10 to 10,000; and its fleet from 6 single-seat, open-cockpit planes to 135 giants of the sky.

Esso is proud to have had a share in this great achievement. For many years Esso has fueled United planes, and now at many large airports Esso Aviation Gasoline is used exclusively for United's fuel requirements.

Typical of the close cooperation between Esso and United is the recent introduction into service for United at LaGuardia Airport of two 5,000-gallon refueling trucks designed by Esso Automotive and Aviation Divisions. A modern hydraulic power take-off pumps the fuel, eliminating the need for a separate pumping engine,

and supplies each of two hoses with 125 gallons a minute—although the capacity is much greater.

Not only do many leading airlines look to Esso for their petroleum product needs, but also many executive aircraft and private plane owners prefer Esso Aviation Products, and look for them at the airports they use.



AIRPORTS

problems with airline managements. "We feel it is only reasonable for us to furnish our cost figures as well as to ask for yours," said Stewart, pointing out that C & S last year began the practice of mailing its annual report to the airport people with whom they deal.

4. Renunciation of contracts.

"In several instances, airport officials have talked about throwing out an existing contract and starting over, instead of trying, as most airports do, to work out the best possible solution within the framework of the existing leases. To do otherwise than the latter would be to discourage any use of leases, and just as an airline accident reacts against all airlines, so does one renounced lease react against the sincerity of all airport managements."

5. Methods of accounting.

"The true airport cost picture is sometimes distorted by the method of accounting, with some communities amortizing the cost of land which actually is becoming more valuable as time goes on. Furthermore, if the city recognizes the high value of its airport in stimulating and facilitating business in its community, it should not be unduly concerned if fair and reasonable rates are charged and there is still a deficit."

On the controversial subject of landing fees, the C & S president said his company is in complete agreement that airport use charges should be on a weight basis and "will continue to advocate such a basis for payment whenever our landing fees come up for negotiation."

However, the important thing, he said, is not the method of cutting the pie but the size of the pie.

"We feel that our airport use charges should be related to the cost of providing the facilities used by the airlines, and in all cases 'related to' will not be 'equal to' . . . The user should not be required to pay for facilities which he is not able to use."

Stewart concluded that airport-airline relationships can stand a lot of improvement, and can be improved materially if approached in a spirit of give-and-take.

AIRPORT PEOPLE

William M. Connor on May 1 assumed the duties of assistant manager of Bradley Field, Windsor Locks, Connecticut.

Paul Sanger has resigned as manager of the Kelso-Longview (Wash.) Airport.

Duane Closs is the new airport manager at Yankton, S. D., succeeding Alan Sparrowhawk.

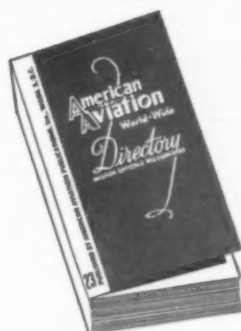


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What Airports Will Need to Rate Latest Aids

NEW airway planning standards recently circulated by CAA's Office of Federal Airways are expected to smooth the way for Budget Bureau approval of requests for terminal, navigational and on-route aids at airports meeting the criteria established.

"What these standards do in effect is to establish a floor above which we hope we will be able to justify projects to the Budget Bureau, *per se*," explained Don King of the Systems Planning Board of Federal Airways.

Projects not meeting the standards will have to be justified individually, he added.

Airways Planning Standard No. 1 sets up criteria covering the installation of airport traffic control towers, instrument landing systems, airport surveillance radar, precision approach radar, terminal VOR, and terminal omni-ranges.

Control Towers

Using an index based on statistical data recorded by CAA tower controllers, Federal Airways came up with this floor for justification of tower service:

1. At airports having 7,000 or more annual scheduled air carrier operations; or

2. At multiple airports (a) in large metropolitan areas where more than one airport is required to handle the volume of air carrier operations, or (b) in areas where segregation of air carrier operations and other civil and military operations is required for safety of operations; or

3. At airports having less than 7,000 but more than 4,000 scheduled air carrier operations annually and air traffic control monthly point score of 14,000 or greater (based on 10 points for a scheduled air carrier; 5 points for an itinerant flight, and 1 point for a local flight, made by actual survey).

ILS Criteria

An ILS is to be deemed justified if:

1. The number of instrument approaches per month at an airport ex-

ceeds 100, based on an average of the four highest months; or

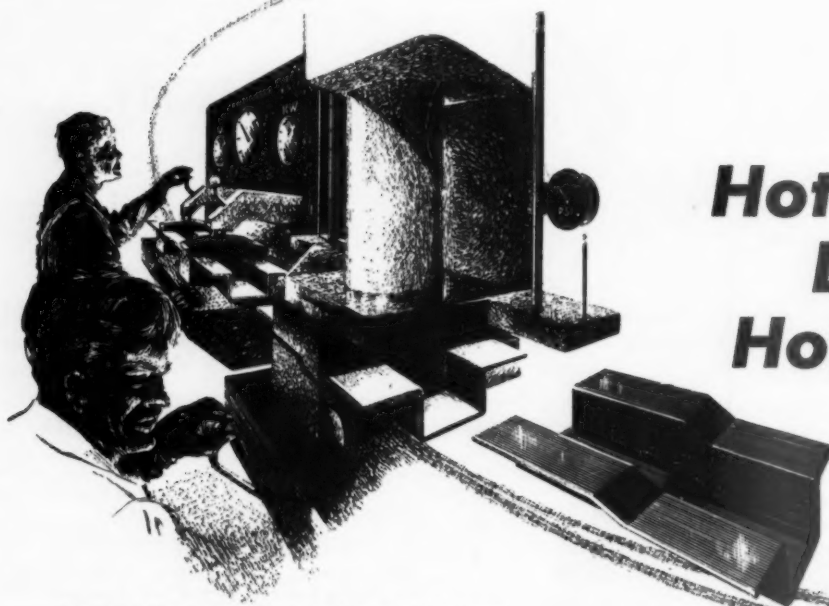
2. Number of scheduled air carrier operations per year exceeds 7,000 and number of instrument approaches per month exceeds 20, based on average of four highest months, or

3. Number of instrument approaches and scheduled air carrier operations are less than those set forth under Nos. 1 and 2 (above), but due to geographical considerations or other reasons, an ILS is necessary to meet safety and system requirements.

Surveillance Radar

King expressed the view that it would be desirable to install surveillance radar at each airport having a CAA control tower as a traffic control aid if cost were not a factor. But because installation and operating costs of this aid are so high, he declared, the following criteria were adopted as justification for installation of airport surveillance radar at tower airports:

1. Number of instrument approaches



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per month exceeds 150, based on average of four highest months of a 12-month period, or

2. Number of annual scheduled air carrier operations at the airport exceeds 20,000, or

3. Geographical position of the airport is declared critical in meeting national system requirements, or

4. Military and non-scheduled civil instrument flying activity on or near the airport is sufficiently high to warrant the location receiving special consideration.

Precision Approach Radar

Precision approach radar, which is used primarily for monitoring ILS approaches and is even more expensive than surveillance radar, will be justified only under these strict criteria:

1. Number of instrument approaches per month exceeds 300 (based on average of four highest months of a 12-month period); or

2. Number of annual scheduled air carrier operations at the airport exceeds 30,000; or

3. Geographical position of the airport is declared critical in meeting national system requirements, or

4. Military and non-scheduled civil instrument flying activity is sufficiently

high to warrant the location receiving special consideration.

Terminal Omni-Ranges

Establishment of a terminal Omni-range will be deemed justified when:

1. The number of annual scheduled air carrier operations at the airport exceeds 3,000; or

2. The number of instrument approaches per month at the airport exceeds 25 (based on a four-month average), or

3. Air traffic control requirements dictate the need of additional navigational assistance in the vicinity of an airport in the interest of expediting air traffic movement.

"The fact that an airport meets the conditions we have laid down doesn't mean that tomorrow it will get the facility desired," said King. We will still have to go to the Budget Bureau and to the Congressional appropriations committee, but we have talked informally to Budget Bureau officials on these criteria, and they have expressed their satisfaction with them."

Communications Stations

Airways Planning Standard No. 2 established criteria on two important

functions of INSACS—air traffic control telecommunications and flight assistance service. These criteria are set up on a point system, with a certain number of points given to ATC telecommunications, IFR radio contacts, IFR flight plan operations, VFR radio contacts, VFR flight plans rendered, and takeoff and landing advisory service at non-tower airports.

Out of the total number of points needed for justification of an INSACS, at least half must be from one of the two major services of ATC telecommunications and flight assistance.

First Criteria

APS-2 marks the first criteria CAA has had for the establishment of a communication station, such stations generally having been installed along with the radio ranges.

The two planning standards were made public by King at the Airports Advisory Committee meeting in Wilmington, Del., in early April, and comments were for the most part favorable. He emphasized that the criteria are not inflexible but are only intended as a floor under justifications for installations of terminal aids for air navigation.



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Regent's Rocket 260

... Latest Entry in Executive Plane Field



REGENT ROCKET has a cruising speed of 177 mph, top speed 198. Its range is about four hours with a 45-minute reserve, according to company figures. Designer R. S. Johnson flew the plane for the first time April 22.

By VERA FOSTER

A NEW entry into the executive aircraft field, the Regent Rocket 260, made its first flight April 22 at Rusk County Airport, Henderson, Tex.

R. S. (Pop) Johnson, who piloted the plane through its 12-minute first flight, said performance was up to expectations. The airplane attracted considerable local interest since the Regent Aircraft Corp. is composed entirely of Henderson businessmen.

The plane was designed by R. S. Johnson and his three airline-pilot sons, Dave, Eddie and Odell.

Chief engineer on the project is M. Mitrovich, a designer with three type certificated models to his credit.

The plane is a sleek, all-metal monoplane designed to carry four hours' fuel, a pilot, and four passengers, or 770 pounds of freight.

At gross load the wing loading is 20.2 pounds per sq. foot, if the 27 sq. ft. of fuselage is included. The more conventional way of figuring the wing loading, which includes the area of the wing, flaps and ailerons, comes out 24.5 pounds per sq. ft.

Stalling speed, at sea level, flaps down is given as 66.7 mph and "landing speed" flaps down 58.2 mph. Apparently there is an 8.5 mph spread between the two.

Aeronautical engineers state that this difference between stalling and landing speed may be due to the use of power just before landing which could smooth out the airflow and

delay the stall. Other engineers believe that proximity to the ground, encountering a "ground cushion," may have something to do with the spread between landing and stalling speed.

The Rocket's tricycle landing gear should make landing less difficult than the slightly high stall speed would indicate. The designers had to sacrifice something to attain the Rocket 260's cruising speed of 177 mph at 75% normal rated power and top speed of 198 mph.

The weight of the plane, gross 3,150 pounds, includes 1,240 pound for passengers, baggage and fuel. Empty weight is 1,910 pounds. The plane looks sturdy and has a well streamlined exterior.

The Regent Rocket 260 was designed in exactly 11 months from the day engineers drew the first line on the board. This, Johnson said, broke a development record maintained in all six of the planes he has designed to date.

The Regent Rocket differs from the Texas Bullet, also a Johnson design, in that a tricycle-type gear has been added, the aileron hinges cleaned up and venturi system revised for lower drag. The Rocket carries one more passenger than the Bullet and 55 more horsepower, five square feet of wing area and a little over three feet in length have been added.

The Rocket can be easily converted into a two-litter ambulance plane, according to Regent. This would add to its value for the fixed base operator.

Present plans of the company are to offer the airplane to the Army Field Forces, the U. S. Air Force and the Navy for evaluation.

Profile of New Regent Rocket 260 (Company Specifications)

Empty weight, including standard flight instruments and VHF Receiver, lbs.	1,910
Load carrying capacity, lbs.	1,240
Gross weight, lbs.	3,150
Fuel consumption, cruising, gph.	12.5
Fuel capacity, gal.	60
Maximum take-off power, hp.	260
Wing area, sq. ft.	129
Span, ft.	30.5
Length, ft.	26.25
Height, highest part of airplane, ft.	7.0
Wing loading:	
(Considering normal area), lbs.	24.5
(Including 27 sq. ft. of fuselage), lbs.	20.2
Maximum speed, sea level, mph.	198
Cruising speed, 75% power, mph.	177
Stalling speed, flaps up, mph.	74
Stalling speed, flaps down, mph.	66.7
Initial rate of climb, ft./min.	1,132
Service ceiling, ft.	16,000

CAA Specification Changes

Bellanca Model 14-19 aircraft are approved with Hartzell controllable propellers Hub Model HC-12x20-8, blade model 8428-6, 68 lbs. (-58) and Hub Model HC-12x20-8C, blade model 8433-6, 61 lbs. (-58), by Specification 1A3.

Luscombe 3 series and Model 11A (four-place) aircraft manufactured after Jan. 2, 1951, must undergo detailed inspection by CAA representative since present production basis is "None", according to Specification A-804 and A-694.

Republic Model RC-3 aircraft are approved with United Air Products Model U-3170-D-5 oil cooler in accordance with Parts List No. 1 and Installation Instruction No. 1 of Kenmore Air Habor, Inc., Box 64, Kenmore, Wash.

Ryan Navion series are approved with propeller spinner, Hartzell Model D-164. Eligible on Hartzell HC-12-20-8C propeller. Hartzell "Installation and Service Instructions" pertain to the use of this spinner on Navion "B" aircraft, according to Specification A-782.

Cessna Model 305A (USAF L-19A) is approved for landplane, skiplane and seaplane operation. CG limits and installation items are listed. Export eligibility—Canada. Operating limits and placards are given in Spec. No. 5A5.

Taylorcraft models BC, BCS, BC12, BC12D, BC12D-4-85, BCS12D-4-85 series are approved with propeller limits of 2300 to 2070 for A-65-1 engine and 2250 to 2070 for optional engines, by Spec. A-696 revision 8.

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THE

Washington View

By Vera Foster



THE NATIONAL Capitol Wing of the CAP is getting student pilot certificates for all cadet members of the wing. This trend may well spread across the country. CAP requires the cadets to pass the pre-solo, 25-question exam before the certificate is awarded, as well as comply with CAA requirements.

A talk or two before the local CAP unit, or any courtesy extended them, would not be time wasted for operators. The CAP lines up prospective students and makes them sitting ducks for alert operators. Though CAP is not allowed to give flight instruction the pre-flight indoctrination rides and the excellent ground school courses whip up enthusiasm for flying.

Miami will have another January air show, the Florida Air Pilots Association assures us. It will be called the Second Annual FAPA Airshow. Jess Bristow, popular veteran pilot, was re-elected recently as president of the Association.

Aerial crop dusting and spraying courses are gaining popularity. The State College of Washington conducted a five-day course at the Perry Institute in Yakima, with about 100 attending.

Dusters also obtained useful information at the third annual meeting of aerial applicators at Purdue University. Talks were given on use of new concentrates introduced in 1951, protection of pollinating insects, helicopter dusters, and information on insect cycles. Some operators present, stated that they are considering procurement of ground equipment to supplement their aerial applicators. Their aim, more complete and efficient service to customers.

The Flight Safety Foundation has added aid to agricultural flying to its 1951 program. Already dusters have received bulletins on precautions necessary when applying organic phosphate insecticides.

Parks Air College finds civilian-military relations off to a good start due to custom of civil fraternity groups welcoming new classes of 30 GI's each week with coffee and doughnuts. Even though arrival time may be 3:00 a. m., the boys are there.

North of the border aircrew training is booming. Before June, 40 navigators and 60 pilots will graduate from RCAF schools. Canada has offered to train 1,100 North Atlantic Treaty nation aircrewmembers annually. The NATO has recommended that all openings for trainees for 1951 be allocated to RAF personnel from Great Britain.

At the recent helicopter forum here, a Canadian operator, Carl Agar, told of setting up whole mining camps of 70 and 80 men by helicopter on the sides of craggy mountains. Landings are made at altitudes of 4,000, 6,000 and even 8,000 feet in any space "large enough for the wheels." Parts "heli-toted" in included two complete 50,000 gal. storage tanks, personnel, and concrete mixers. How do you lug a cement mixer bowl? Easy, he said. Just dig a hole, put the bowl in it, run the helicopter over it and tie it on. Of course the load must be set down gently and cut loose before the landing. Six 'copters were used.

The Elmira soaring meet, July 4-12, has already attracted over 78 pilots from 12 states . . . Gallion-Crestline Airport, Ohio, has new operators; the Fischer brothers, who also operate Sky Haven Airport at Shelby, Ohio . . . Retirement of Dr. Dean R. Brimhall from CAA leaves a big gap in the research coordinator department. His work on stall warning, flight technique and reducing medical requirements have made him popular with the nation's pilots . . . Six soil conservation air tours are planned in Minnesota.



Cross-Country

----- WITH LOCAL OPERATORS -----

By Page Shamburger

ALABAMA—Allenport in Montgomery is owned by J. W. Allen, but S. R. "Stumpy" Armstead is the manager. Stumpy says Allenport will make money this year, and credits a lot of the interest to the enthusiasm built up by a sailplane. Students can get dual or solo time in the sailplane, and it's most reasonable.

Bob Hudgens and Charles Womack with Montgomery Aviation Corp. on Dannelly Field hold down the only operation on Montgomery's Municipal. They've got a contract with Alabama Power patrolling 2,000 miles of power lines and say it's a good source of revenue. They say their business is definitely improving and charter is good. They have about 35 privately owned planes based there. Newly elected mayor of Montgomery is an enthusiastic pilot . . . he learned to fly under the GI Bill.

State of Alabama is in the midst of a fight to remove state gas tax. Though the tax is used for improving airports, it does a lot of damage to the operators by reducing gas sales.

Henry van Kesteren on Dallas Field in Selma has a swell sod airport. Van says most of his revenue came from dusting and spraying last year, but this year he expects great things from the instruction line. Craig Field has just been reactivated and those flyboys like lightplanes, too. Van suggests a Cub Kit for making a Tri-Cub to all operators. It arouses lots of interest, he says, and of all his students in the last two months, none have needed over five hours to solo it.

Strange how Van named the airport . . . it's in Dallas County, on Dallas



Cessna wheel extension kit, which gives more braking power, costs from \$9 to \$14, depending on plane model. Installation time runs about three hours.

Avenue, but, mainly they wanted to live in Dallas, Texas, after the war, and this is as close as they could come.

Dallas Field decided many dusters were trying to make a BT out of a Stearman, so, why not reverse the process. The BT was a standard model with the top wing the outer wing panel of a standard BT wing. It'll carry 1,800 pounds of dust and loses 10-15 miles an hour cruising speed. Yes, have seen BT engine, wheels, etc., on a Stearman, but this is the first time . . . a bi-wing BT.

Asa Rountree, Jr., director of the Alabama Department of Aeronautics, is really on his toes promoting good will for the Alabama flying public and outfitting the state with a large number of good airports. At present writing there is an airport in every major city in the state and all but one of these is paved. Besides the building of airports, terminal buildings, maintenance, etc., Asa has handed a paintbrush to constructors of 500 air markers. He was appointed State Director in 1936 and has served ever since, except during the war years. He has served longer than any other state director of aeronautics.

James McAllister on Huntsville Municipal gets most of his revenue from dusting and spraying. He's got the system with his duster pilots being instructors and A & E's, too. Because of this, the pilots do not have to be laid off when the dusting season is not at its peak. Mac sees to it his dusters and sprayers are kept in top-notch condition and has to lose no time, during the season, on maintenance. He says defoliating is coming into its own.

Mac is Huntsville's manager, too, and is looking at aviation with brighter eyes now. He has no GI's and says things are really looking up. All planes are up \$50 to \$100 above last year, and transients visits average between 60 and 80 a month. Can see why, too, with the good service and friendly pilots like Fred Horne going all out to help . . . he's wonderful about giving transportation into town and is at the 'port every week-end and late afternoon. Coming down out of "the hills," it's good to see Huntsville's beautiful runways, fully equipped with lights. Construction on a new terminal building is under way.

MISSISSIPPI—Bob Christopher at Grenada is another operator depending on aerial application. He's right on the edge of the delta and works on cotton. Bob's got seven dusters and seven pilots and says spray is not as popular as dust. Most farmers agree to spray only after the dust is getting hard to get. He does keep Grenada open and gives you good service . . . unusual on a dusting field.

Red Bagby, manager of Vicksburg Municipal, General and Adjutant of the



E. C. Beardon, Athens Aviation, Inc., Athens, Ga.

Confederate Air Force, is also in farming. First, he's planted a seed crop of clover and then he's planting hay. He's right behind the farming in an effort to make more funds for the city. Vicksburg has no operator, though they hope for one in the near future, but Red sees to it you get good service and a friendly atmosphere. It's a well equipped airport with a new terminal building, housing Southern Airways with its six flights a day. When the new terminal was completed CAA moved in, but as Red says, moved right out again . . . seems that was the time of the 10% government cutback.

Vicksburg, too, is headquarters for the lower Mississippi River Control. It's the world's only experimental station with models of the river from Cairo, Ill. to New Orleans. Engineers come from all over the country to study here. Many come by plane and MRC has a large hangar on the airport.

McComb Airways at McComb Municipal, is the operation of Billy Odom, and he's really making money, too. Billy says his business has been good for the past two years and is improving. The reason? He's hard at work promoting and looking for potential plane users. In other words, he gets off his base and operates. Still got GI's and good charter work. There are 30 planes operating in and out of McComb and Bill's got 'em for maintenance and servicing. Forestry patrol is a boost in the dry winter months, too. There's a communication station on the airport and the CAA boys go out of their way to be as helpful as possible. The north-south runway is under construction . . . it's to be hardsurfaced with hopes of getting to be an airline stop. McComb people contribute the cash for improvements on the airport and the city has only to furnish equipment. That's good spirit on the part of the aviation enthusiasts. They are not taxed . . . they just donate the cash.

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Temco Swift aircraft are required to undergo inspection of the front stabilizer spar attachment to the fuselage bulkhead. If bolt holes are normal, AN3 bolts should be reinstalled but if holes are elongated, the AN3 bolts are required to be replaced with AN4 bolts at the next periodic inspection but not later than May 1, 1951, by Airworthiness Directive 51-8-3.

Cessna Model 190 and 195 aircraft Serial Nos. 7004 to 7474 and 7476 to 7479 inclusive must be inspected for fatigue cracks in the elevator spar webs at outboard hinges. Cracks extending less than 3/4" beyond hinge fitting can be stop-drilled and reinforcing doublers installed. Cessna Parts 10008-11-2 and 3. Longer cracks require new spar plus doublers. See Cessna Service Letter 10, Nov. 18, 1949. Airworthiness Directive 51-11-2.

Temco (Formerly Globe) Models GC-1A and 1B, all serials. At each 100-hr or annual, check that cumulative slack or gear, fore and aft, does not exceed 5/8". Check all landing gear pivot points for wear. Install spacer in emergency landing gear pull down system. Inspect emergency brake system. See Temco Service Bulletin 28. Airworthiness Directive 51-11-4.

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WINGS OF YESTERDAY

25 Years Ago

Two contract air mail services were inaugurated in April, 1926—Florida Airways, headed by Maj. Reed M. Chambers, on its route between Miami and Jacksonville, Fla., and Western Air Express, Inc., over the Los Angeles-Salt Lake City route.

As a result of the Franco-German air agreement signed in Paris on April 14, 1926, French and German airplanes were allowed to fly over the two countries, thus permitting the opening of new direct air routes between London, Paris and Berlin and to Copenhagen and Moscow by way of Germany.

10 Years Ago

(In AMERICAN AVIATION)

Development of the Model 49 Constellation was revealed for the first time. Lockheed Aircraft Corp. had been selected to build the plane designed by Howard Hughes, president of Hughes Tool Co., and Jack Frye, president of TWA. Pan American and TWA had ordered 40 each.

Ralph S. Damon, v.p.-operations for American Airlines, was elected president of Republic Aviation Corp.

Three U. S.-Canadian airline links were established: Trans-Canada Air Lines was given a Toronto-New York non-stop route; American Airlines received a Buffalo-Toronto certificate, and American was awarded a Windsor stop on its New York-Chicago AM-7.

LETTERS

Airlift Issue

To The Editor:

I have read with considerable interest the many articles concerning the Military Air Transport Service operations which appeared in the April 16 "Airlift for War or Peace" edition of AMERICAN AVIATION. The entire issue made excellent reading.

I deeply appreciate your publication's interest in MATS as evidenced by your sending Jim Haggerty and Bill Perreault to this headquarters at the cost of considerable time and effort to obtain the complete factual material about our command. Eric Bramley, Jim Haggerty and Bill Perreault have done an excellent job in your second annual Air Transport Progress Issue.

Your continuing interest in MATS is appreciated. On behalf of all personnel

in this command, I wish to extend my thanks to you and the above individuals for a very fine issue.

LAURENCE S. KUTER
Lieutenant General, USAF
Commander, MATS

To The Editor:

I have read your annual issue (April 16) with much interest and have used it to good advantage. Congratulations to you and your gang—it is an excellent issue.

J. H. CARMICHAEL,
President Capital Airlines.

To The Editor:

Sincerest congratulations to you and the staff of AMERICAN AVIATION for the most comprehensive and inclusive aviation publication that I have ever had the pleasure of reading. Of course, I refer to your April 16 issue and the "Airlift for War or Peace." It's a fine and splendid job and you should be justly proud.

ROBERT J. SMITH
President
Pioneer Air Lines, Inc.

To The Editor:

You and your associates are eminently deserving of the highest praise from the industry for the spectacular current edition of AMERICAN AVIATION magazine. This thoroughly informative and beautifully edited publication is not only absorbing reading, but constitutes a tremendous asset as an important reference source.

G. T. BAKER
President
National Airlines

To The Editor:

Many congratulations on the very, very fine Annual Air Transport Progress issue of April 16.

A beautiful piece of work, and I am proud that Continental has such a nice piece of copy in this outstanding publication.

STEWART FAULKNER
Continental Air Lines

To The Editor:

Congratulations on the splendid issue of April 16 containing a most complete report of the U. S. airlines.

Also your splendid editorial on 25th anniversary of scheduled air transportation.

You always come up with the right things when it pertains to aviation. May you long continue in this fine work.

M. G. LICKTEIG
Air Express Division
Railway Express Agency

To The Editor:

Your second annual Air Transport Progress Issue is beautifully done. It is a fine contribution to aviation. More power to you.

WALTER H. NEFF
United Air Lines
New York

To The Editor:

Congratulations on your outstanding April 16 issue. It certainly gives a masterful bird's eye view of the air transport industry.

E. THEODORE STERN
New York

To The Editor:

Old age generally slows everybody down, but the older AMERICAN AVIATION gets, the better it flies. My congratulations on the April 16 issue, including Facts and Figures. We have circulated the magazine to practically everyone in our organization.

KEITH KAHLE,
President Central Airlines.

Two on a Beam

To The Editor:

Having read your "Win By Confusion" in the April 30 AMERICAN AVIATION then picking up my *National Republic* for April, 1951, and reading "Turning Searchlight on Reds" by Walter S. Steele, it looks to me as though you two were on the same beam and doing a darn good job of it. Congratulations.

OTHEL BAXTER
Maj. CAV-Ret.

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IN FLIGHT

A PAGE FOR ALL PILOTS

When Pilots Bail Out

While 49% of the 850 pilots bailing out of U. S. Navy aircraft over a five year period made successful bailouts without injuries, the record could be much better if air crews were given the proper training. In the April issue of the *Journal of Aviation Medicine*, Lt. Comdr. W. L. Jones, provides some new data on experience of Navy crews in leaving fighters, attack planes, trainers and other ships in mid-air.

Pilots generally bail out as a last resort. This is emphasized in the breakdown of reasons for bailing out compiled from these 850 jumps:

- 48% Bailout followed mid-air collision
- 16% Bailout followed power failure
- 10% Bailout followed fire
- 7% Bailout resulted because of lack of fuel
- 5% Bailout after darkness in bad weather
- 6% Bailout after failure to recover from an inverted spin
- 4% Bailout after failure to recover from a normal spin

Still the record, while indicating need for training, is promising. 417 of the 850 pilots landed with no injuries, 16% or 134 were killed, only 75 (9%) experienced serious injuries and 224 (26%) minor injuries. Half of those killed bailed out too low for the parachute to open or were drowned after landing in water.

Altitude at which the bailout is attempted has some effect on the success of the bailout as has the speed of the aircraft. Sixty-two percent of those pilots making exists under 500 feet were killed. Of those bailing out between 500 feet and 1,000 feet only 8% were killed, 10% between 1,000 and 15,000 feet and 12% of those above 15,000 feet. However, one pilot made a successful bailout without injury after pulling the ripcord at 200 feet.

At speeds up to 200 knots (230 mph) pilots reported little difficulty in getting out of the aircraft but above this speed difficulties were encountered. Of 400 pilots reporting attitude of aircraft at the time of bailout, the consensus was that the best attitude for successful escape is inverted. Fatality rate for this type bailout was 8% as compared with the over-all rate of 16%. Next best attitude was level with 12% fatalities and the worst a normal spin with 26% fatalities.

About 19% of those making night bailouts, as 7% of the group under study did, were killed.

Failure to clear the aircraft structure is a major factor

in both injuries and fatalities with 65 people (42%) of this group killed and 31% receiving serious injuries.

Injuries on landing were experienced by 78 pilots with failure to collapse the canopy responsible for most of the six related deaths. There was only one case of a pilot killed because, in attempting to direct his landing, he spilled the chute.

Safety from Hard Work

The 33rd Fighter-Interceptor Wing, at the Otis AFB, Mass., has flown swept-wing Sabres, the world's fastest airplane, without accident in a recent three-month, 6,000 flying-hour period. The wing checked out 24 reserve pilots as well during the period.

The "Flying Cape Codders" credit their safety record to daily checks, preventative maintenance, careful supervision and frequent bull sessions. All landings are graded—a good idea at any field—as rough, satisfactory and excellent.

To achieve check-outs in these fast planes without accident the 33rd found exhaustive cockpit check-outs invaluable. Before a pilot was allowed to leave the ground, instructors made sure that the position of every knob, handle and gage was memorized as well as procedures.

Streamlined Private Exam

Proposed changes of Civil Air Regulations Part 20 will alter more than requirements for private pilot written examinations. The proposed CAR 20 presents a streamlined flight test with several added cross-country requirements as well as added scope to the written examination.

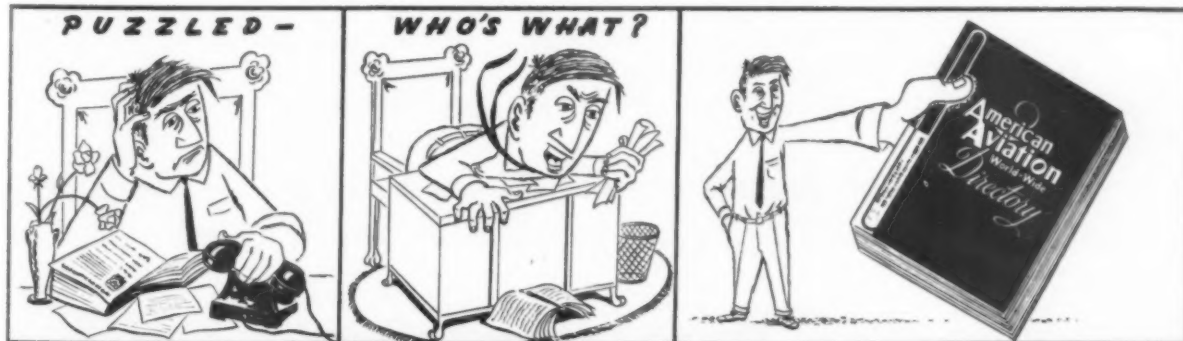
Instead of requiring a certain number of hours in two-control, another set of hours for three-control, etc., the new rules will call for a straight 15 hours of dual and 25 hours of solo for private pilot certificates. The dual must be given by a rated flight instructor.

Of the 25 hours' solo time, 10 hours must be cross-country with no landing to be closer than 25 miles from home base and at least on landing over 100 miles out. Before solo cross-country the student must receive three hours dual instruction with a total of five dual cross-country hours required.

The extra dual cross-country time offers a good chance to teach radio navigation.

The flight test, according to the proposed Part 20, must include demonstration of the applicant's cross-country planning and flying technique as well as "soft field" and emergency takeoffs and landings.

Applicants are now allowed to use "power, flaps and slips" at his discretion in making landings. No accuracy requirements were given for landings.



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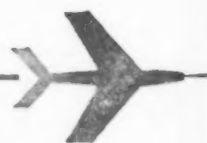
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Barantagalog. Some hot evening this summer when I'm invited out to a party I'm going to make my debut in a barantagalog.

I'm right proud of it. When I dropped in on Iloilo down in the southern Philippines, the local personnel of Philippine Air Lines took up a collection and presented me with this barantagalog in honor of my visit and I really felt like a celebrity.

Don't tell me you don't know what it is. Such ignorance is inexcusable. Matter of fact, I'd never seen nor heard of one myself until I got out to those islands. But it's just the thing to dress up in on a hot humid night.



A barantagalog is a very thin, shirt-like affair made of pina (pineapple) cloth and fixed up fancy with lace. You put it on over a T shirt, leave the collar open, and let it hang outside your pants. You keep cool as a cucumber on the hottest evening and still look all dressed up.

Iloilo. This barantagalog—where they ever got the name I don't know—is for formal evening dress in the hot Philippines. The women use this same pina cloth for evening dresses. Bobby Lim, one of PAL's top men and a smart lad if I ever saw one, was wearing one of these things on a hot night while I was trying to keep dressed up and sweating all out. I wouldn't have had the nerve to buy one, but I was mighty happy when that gang of friendly airline folk in Iloilo handed me one as we were leaving there on a hot Sunday afternoon. And I hadn't even hinted that I wanted one.

So thanks to Enriques Torres, Margot Orozco, Antonio Misa, Jabby Hernandez and all you other good people out there who put in fifty centavos to buy me a swell present. Frankly, I don't think I'm worth fifty centavos each, but I can assure you I'm just waiting for a hot evening to put on that lace shirt.

By the way, do you know how to pronounce Iloilo? It bothered me all the way out to the Philippines. I simply couldn't figure out how to say it. But it's as simple as saying "cat." Just say eelo twice—eelo-eelo. Get it? Ain't many folks as stupid as I am but I sure have fun learnin'.

Nobody's Hungry. Nature has been good to the Filipino. The average family has a very low income. In a more northerly climate they would be poverty-stricken. But the Filipino can get along without working if he wants to. At his doorstep he has bananas, coconuts, fish and rice. Everything grows the year round. Bamboo for his nepa hut is plentiful. He needs little clothing. Such things as automobiles are beyond his reach. If he wants to work he doesn't have far to look for a job and the pesos he gets will buy a radio and goods in town. Nobody starves in the Philippines. Almost everyone has staked out his piece of land. It's a simple life but it must be okay—there are more smiles per mile in the P. I. than anywhere I've been.

It's surprising how English has taken over as the common language. Some



Spanish is still spoken but not much. The national dialect is tagalog, spoken chiefly in the northern provinces. In the south there is the visayan dialect with many variations and in the far north the ilocano. The Moros speak their own in the south. Near Clark Field, the U. S. air base, they speak pampagne which is of Siamese derivation. But most of the dialects have a Malayan base.

Most newspapers are in English. So are most of the advertising and signs.

Roll the Dice. Around Manila and in all of the towns gambling is the rage. It's a craze. There are monthly sweepstakes and everybody buys lottery

tickets. Gambling casinos are against the law but are wide open anyway. Dice games are everywhere, and the favorite seems to be I-I-I's dice. Pass by any cafe or tavern and you'll hear the dice being shaken, even above the ever-present blaring of a radio.

In Manila one of the first things to attract the visitor's attention are the thousands of jeepneys, surplus jeeps



converted into jitneys carrying up to eight people. Most of them have fancy names and painting and they whiz up and down the streets at breathtaking speed. Plenty of accidents, of course. But the jeepney is the most prominent form of transportation in Manila. There are fewer and fewer of the old horse-drawn carts.

Not much gay clothing is seen in Manila. Mostly white, both for men and for women. Those fancy gay-colored shirts which are seen everywhere in California and Hawaii are just barely beginning to make an impression in the P. I. Business and professional men all wear white suits and the best of them seem to be sharkskin. The material is manufactured in the U. S. but not sold in the States. Sharkskin suits can be washed. You're supposed to wear a clean one each day.

Fish Tails Only. If you rate in the Philippines you must have a Cadillac. Not just any Cadillac, but the latest model with the fish tails. No fish tails, no rate. You can buy any style or kind of car off the floor in Manila except a Cadillac—the company couldn't make enough to satisfy the Filipino demand. Where they get the money—well, the government is graft-ridden and nothing will stop a Filipino from getting the dough to buy a big car if he's ambitious to make the social grade. The big gap between the top and bottom in the P. I. is, of course, a social and economic weakness found in all Latin countries and is a sign of poor national health.

But those who do have and get the big money live well. The Sky Room which is part of the Jai Alai court is as swank a place as you'll find anywhere. Air-conditioned, tastefully decorated, with a large orchestra which features waltzing, the place is the latest in sophisticated nightclubbing. It is perhaps typical that the Filipinos would first restore gambling and amusement places before they'd spend money on schools, street repairs, hospitals and the like. The lowly native is forgotten in the swirl of the somewhat decadent top social level of the islands. Or maybe the new republic is just having a hard time growing up.



BOAC Canadair "Argonaut"
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CA51-2UST

AMERICAN AVIATION

NEWS SECTION

(Continued from opposite page 3)

placed by four-engined B-47C using the Allison. Company was to have built engine at Indianapolis while Chevrolet handled overflow at Tonawanda, N. Y. Allison will continue to build other lower-powered J-35's at Indianapolis, while Chevrolet will switch to Wright R-3350 piston engines for AF and Navy. Latter change kills plans for Hudson Motor Car Co. to build same engine; Hudson would have had to build new plant for the production.

P&W-Airline Program: Pratt & Whitney Aircraft Division of United Aircraft Corp. is working on cooperative program with airlines under which operators of R-4360 Stratocruiser engines will be encouraged to convert early B series to more successful C series.

MILITARY

Wichita Base: Air Force now has funds available for building \$37 million Boeing B-47 combat training base at Wichita Municipal Airport. Actual construction is expected to start shortly, with funds being distributed through Corps of Engineers at Omaha, Neb.

Bryan to Reopen: Bryan Air Force Base, Tex., will be reactivated by Air Force early this summer for use as single-engine jet training school.

CONGRESS

House Cuts NACA: National Advisory Committee for Aeronautics, whose budget request for \$25,000,000 for construction of facilities had previously been cut to \$18,350,000 by House Appropriations Committee, was chopped another \$6,500,000 on the floor of the House. Of the \$18,350,000, NACA would keep only \$11,700,000 which would remain available for payments under contracts entered into under authority previously granted. Rep. **Albert Thomas** (D., Tex.), whose amendment cut the funds, said his action was taken at request of Armed Services Committee, which believes it should handle NACA requests. Some of the cut may be made up later. As passed by House, NACA receives \$48,112,980 for salaries and expenses, which is \$6,887,020 under budget estimate but \$2,362,980 over 1951. It will permit hiring 600 more employees out of total request for 1,200.

Non-Sked Hearings Close: Senate Select Committee on Small Business has ended hearings on CAB's proposed limitations on large irregular carriers. **Amos Heacock**, president of Aircoach Transport Association, in response to committee request, submitted plan under which he felt irregulars would be able to operate with some degree of economic sufficiency. He proposed 12 trips monthly between any two points with limitation requiring that trips either originate or pass through carrier's base of operations. Meanwhile, publishers of *Cosmopolitan* vigorously denied to committee that there had been any ulterior inspiration for "Don't Fly the Un-Scheduled Airlines" article. They said any implication that magazine could be bribed or that any article would be published for ulterior purposes "is so ridiculous as to be amusing rather than annoying . . . Those editors published Mr. Courtney's article because they believed such an article was in the public interest and they still think so . . ."

CAB Money Cut: Senate Appropriations Committee deleted \$25,000 from 3rd supplemental appropriation bill which House had allowed for a CAB study of air mail-subsidy separation. If not restored on Senate floor, item will be considered in conference.

Feeder Plane: H. R. 3914 has been introduced by Rep. **Robert Crosser** (D., Ohio) providing not to exceed \$8 million for design, development and construction of plane suitable for local service airlines.

CIVIL AERONAUTICS BOARD

Non-Sked Delay: CAB voted to delay until June 5 effective date of Economic Regulation 291 restricting operations of large irregular carriers. Senate Select Committee on Small Business requested delay so that it can finish consideration of non-skeds' protests.

Twin Cities-Washington Case: Recommendation against elimination of Northwest Airlines' Washington-Detroit service and Capital's Twin Cities-Milwaukee route has been made by CAB Examiner **William F. Cusick** in his report on Twin Cities/Detroit-Washington Through Service Investigation. He suggested one change: NWA's route 3 certificate be amended to permit termination at Detroit of not more than two Twin Cities-Washington schedules, provided such flights make connections for passengers traveling east or west of Detroit on New York-Twin Cities schedules. CAB suggestion that NWA and Capital may operate interchange between Washington, Pittsburgh, Cleveland, Twin Cities, and points west on NWA's route 3 should be found unnecessary in final decision, he said.

87 Employees Needed: Asking \$400,000 more for fiscal 1952, CAB Chairman **D. W. Rentzel** told House Appropriations Committee that CAB needs 87 additional employees to carry out its program under reorganization plan. New employees would be assigned as follows: economic regulation, 56; safety regulation, 2; accident investigation and analysis, 5; executive direction, 4; administration, 20. Rentzel told committee that under Reorganization Plan 13 Congress centralized in the chairman the administrative responsibility for CAB's activities. He added that duplication has been eliminated between bureaus of law and economic regulation.

Applications and Petitions

- **Eastern Air Lines and American Airlines** filed notices of objections to recent CAB mail rate show cause order in which interim 42c ton-mile rate was proposed for "Big Four" airlines.

- **W. R. Grace & Co.** asked CAB to deny petitions of Pan American and Eastern for further hearings on possible Grace control over National Airlines. Grace holds 17.4% of NAL stock but says control issues were thoroughly probed in hearings in NAL Dismemberment Case.

Actions

- **Cordova Air Service** awarded new mail rates calling for 90c base per plane mile November through March each year and 45c base April through October each year.

- **Mid West Airlines** granted continued authority to suspend service at Ft. Dodge, Iowa, until adequate airport facilities are available, for 60 days after CAB decision in Mid-West Renewal Case.

Examiners Reports

- **Trans American Airways and Great Lakes Airlines** should forfeit non-scheduled airline letters of registration for "knowing and willful" violations of Act, according to Examiner **Barron Fredricks**. Board should issue orders directing Edward Ware Tabor and Sky Coach Airtravel to cease and desist from air carrier activities, Fredricks said.

AIRLINES

NWA Leases 2-0-2's: Two Martin 2-0-2's are being lease by Northwest Airlines to Transocean Airlines for 45-day trial period with view to Transocean buying a number of the planes if their use proves satisfactory. Agreement calls for "nominal rental" to NWA with understanding that any profit over and above

Transocean's direct operating costs and NWA's depreciation costs will be shared equally. Fairly active market is reported for NWA's 20 Martins, although no deal has been finally closed.

AA-Delta-NAL Interchange: American Airlines, National and Delta started their Miami-west coast interchange on May 1, half an hour after CAB issued its approval order. Two round-trips daily are scheduled with DC-6's, using NAL's route to New Orleans, Delta New Orleans-Dallas, AA Dallas-west coast. CAB also approved Braniff-Continental-American interchange Houston-El Paso-west coast, which is expected to start about May 20.

MCA, CAL Ask Interchange: CAB has been asked to approve a Denver-Kansas City-St. Louis interchange operation by Mid-Continent Airlines and Continental Air Lines. Initial service would be with CAL's Convairs operated by CAL crews Denver-Kansas City and MCA crews Kansas City-St. Louis. MCA will pay CAL a fixed rental charge for portion of flight over Kansas City-St. Louis, with both lines sharing in revenues in same proportion as in present connecting services.

CMA Orders 3 DC-6B's: Compania Mexicana de Aviacion, Mexican affiliate of Pan American World Airways, has ordered three Douglas DC-6B's for delivery in early 1953.

TWA to Add Coach: TWA will add second New York-Los Angeles Constellation coach about June 10 with intermediate stop at St. Louis. Present New York-Chicago-Los Angeles coach will be maintained. With new trip, company will have 162 coach seats available in each direction.

AA Defends Coach: Claims by non-scheduled carriers that it takes three weeks to get reservation on American Airlines' transcontinental coach trips is denied by AA. In January-March, only 33 of 195 flights were full, and in February-March an average of 10 empty coach seats per day were available for sale at departure time both from New York and Los Angeles, AA said, pointing out that it will also add another transcontinental coach trip via Dallas on June 3.

Navigators Essential: Commercial airplane navigators have been added to Labor Dept.'s critical occupation list for deferment purposes.

Single Agency Opposed: Different forms of transportation should not be put under a centralized government agency but should continue to be regulated by agencies familiar with their individual problems, D. W. Rentzel, Undersecretary of Commerce for Transportation, said in a Washington speech.

Newark's High Rates: Landing fees believed to be highest ever paid in this country have been put into effect at Newark Airport by Port of New York Authority. Affecting United, American, Eastern, TWA and National, agreements run for 10 years from May 1, 1951 to Apr. 30, 1961. Rates: 17.1c per 1,000 lbs. gross landing weight for first five years, roughly equal to 15c per 1,000 lbs. take-off weight; 21.7c (equal to 19c) for second five years. Counter space rental is \$6 per sq. ft., \$4 for other first floor space, \$3 for other space. PNYA agrees to proceed with completion of two new runways capable of handling planes up to 150,000 lbs. gross.

PAA Switches Boeings: Pan American World Airways has assigned to its Pacific-Alaska Division the eight Curtiss electric propeller-equipped Boeing Stratocruisers acquired in purchase of American Overseas Airlines. In exchange, PAD sends eight Hamilton Standard equipped planes to Atlantic Division. Maximum gross take-off weight with Hamilton Standards is 145,800 lbs., with Curtiss electrics 142,500 lbs., and 3,000-mile non-stop New York-London hop is longest on system. Former AOA planes were put through extensive modification at PAA's Miami shops before being sent to San Francisco, where last one is due May 19.

SF Rate Question: American Airlines and Western Air Lines have paid January and February San Francisco airport charges at old rates instead of new ones that became effective Jan. 1. Apparent refusal of these carriers to recognize schedule of increased rates may lead to court action.

People: Harry C. Short, general manager of Continental Air Lines' modification center at Denver for past seven years, has been elected vice president-maintenance and engineering . . . Don O. Benson, who has been with Northwest Airlines since 1938, named manager of general aircraft and communications engineering, succeeding Carl E. Swanson, resigned . . . Maury Huffman resigned as American Airlines' southern regional director of properties and facilities to become executive director of Ft. Worth Terminal Corp. which will operate new Midway Airport . . . A. C. Hunt, who has been assistant to vice president-sales of Slick Airways, named general sales manager . . . P. H. Carr, assistant secretary of Mid-Continent Airlines, named secretary, succeeding John Collins, retired . . . Robert C. Meserve appointed general traffic manager of All American Airways, succeeding Crawford Cline, resigned.

CIVIL AVIATION

CAA May Sell Connie: Provided no other government agency wants it, CAA will ask civilian bids on its Lockheed Constellation. The Connie, one of first 10 built by Lockheed, has very few hours logged because CAA hasn't had funds to fly it at Oklahoma City base. It was used as an indoctrination mock-up. More information will be available in about a week.

Insurance Drops: A 15% reduction in insurance costs for Cessna 170 and 190 and other executive type planes has been announced by Jack Galbraith, Buffalo aviation insurance consultant. Along with rate reduction, which is based on planes' safety record, Galbraith changed terms of hull coverage so as to make the deductible a flat fee instead of the percentage of value as used in past.

Plane Tabulation Issued: CAA's tabulation of civil planes by states and counties as of Jan. 1, 1951, has been issued showing 60,921 active aircraft, 31,888 inactive, for total of 92,809. Total planes in 1950 were 92,622.

FINANCIAL

Airlines

Pan American World Airways 1950 profit of \$4,064,000 on \$153,802,000 record gross revenues. Mail revenues reported were those actually in effect, in contrast to former years when PAA estimated what it should receive, less a reserve. Profit would have been "substantially higher" if former system had been used.

Eastern Air Lines first quarter profit of \$2,577,719 after taxes against \$1,569,999 in same 1950 period.

Continental Air Lines first quarter net \$99,558 against \$53,249 loss last year.

Capital Airlines first quarter profit \$91,841 against \$151,902 loss last year.

Manufacturing

Lockheed Aircraft Corp.'s board approved 2 to 1 common stock split and voted to recommend to stockholders amendment permitting issuance up to 3,000,000 shares of \$1 par capital stock compared with present authorization of 1,500,000 shares. Company has 1,125,704 shares outstanding. Lockheed will pay 50c dividend June 15.

AROUND THE WORLD

Comet Report Wrong: Panair do Brasil, which was reported to have contracted for purchase of three deHavilland Comet jet transports, is actually only considering the purchase and no negotiations are underway.

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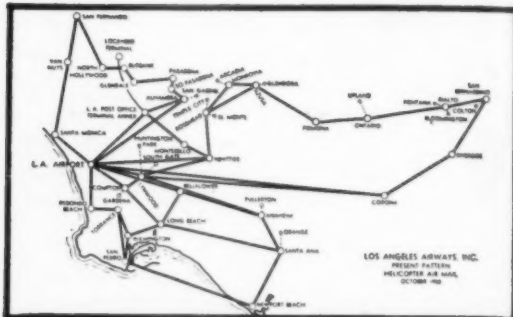
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NEWS ISSUE

May 21, 1951

Vol. 14 No. 44

a LOOK at the WEEK

Concerted move is underway to switch airline planes from National Production Authority's "B" list to "A" list and to get okay on production of 2,500 personal planes a year under Controlled Materials Plan. NPA, which has been stumbling block, is reported adamant, wants present set-up to remain. But heat is being put on from industry and government.

Although announcement of Gen. Donald Connolly's appointment as special assistant to Undersecretary of Commerce Del Rentzel said he'd only serve 90 days as head of civil aviation mobilization matters, he'll remain as long as needed.

An airline president, incidentally, will head up Air Transport Division under Gen. Connolly. He'll spend three days a week in Washington.

Navy's plans to buy about 80 four-engined transports out of 1952 funds (News Section, May 14) has stirred up old Air Force-Navy feud over military air transportation. Irritated AF officers are again saying Navy is building up its own separate transport system.

Former airline traffic man is slated to take over as chief of National Production Authority's aircraft division.

U. S. and Mexico will make another major effort next month to conclude civil air agreement. Informal agreement is said to have been reached. If proposal is accepted, CAB will have to change original Mexican route awards—Mexico refused to accept all of them. U. S. made substantial concessions, at least informally.

One of biggest problems facing fixed base operators is manpower. They're losing personnel to airlines, reserves, draft. Flight instructors and A&E mechanics are badly needed.

Rising costs of new and used planes are forcing airlines into higher insurance coverage. They're finding they have DC-3's and DC-4's insured for only one-third to one-half of current replacement costs for same planes.

Two important Air Coordinating Committee reports due soon, possibly this week: one on future commercial possibilities of helicopters, other on separation of international air mail pay and subsidy.

K-F Buys 49% of Chase Stock

In a major manufacturing development, Kaiser-Frazer Corp. has purchased 49% of the stock of Chase Aircraft Co. for an undisclosed sum.

It was learned that the Chase C-123 twin-engined assault transport will go into production under Air Force contract. AF admitted officially that it is surveying facilities for production of the plane by two sources.

Chase will undoubtedly be one of the sources, but AF wouldn't comment on the other. Officers said that K-F's purchase doesn't give it any C-123 production rights, since these rights are the sole property of AF and can be assigned to any qualified manufacturer. K-F, which is preparing to produce under license the Fairchild C-119 Packet, twin-engined troop and cargo transport is a qualified manufacturer and might be designated, but indications were that other companies were also being considered.

New Chase management line-up will be:

Edgar F. Kaiser, K-F president, becomes president and chief executive officer of Chase.

Michael Stroukoff, former Chase president, serves as executive vice president and chief engineer in charge of research and development.

Jesse X. Cousins, present Chase treasurer, remains in that capacity.

New board of eight directors is to be named, three selected by K-F, three by Stroukoff, two by outside interests.

A committee is to be named by Kaiser and Stroukoff to review the Chase production and engineering organization with a view toward immediate expansion "in order to expedite existing production engineering contracts with the Air Force."

Chase has been in limited production for the Army on the C-122 twin-engined assault transport. Only construction of C-123 to date has been one experimental model, and one jet-propelled model, the XC-123A.

Aircraft Production Board Established

An Aircraft Production Board has been established under Defense Production Administration and has held several meetings, although there has been no formal announcement of formation of the group.

In the absence of such announcement, it's too early to tell how the Board's powers will compare with those of the World War II APB, but one official stated that it will be a "top policy board."

Here's the membership, with names of those who have been attending meetings:

Acting Chairman: W. W. Watts, assistant to DPA Administrator.

Air Force: Lt. Gen. K. B. Wolfe, Deputy Chief of Staff, Materiel.

Navy: Rear Adm. Thomas S. Combs, chief of Bureau of Aeronautics.

Army: Brig. Gen. John K. Christmas.

Munitions Board: Cornelius W. Middleton, vice chairman of production requirements management.

Department of Commerce: D. W. Rentzel, Undersecretary of Commerce for Transportation.

National Production Authority: Manly Fleischmann, Administrator.

REFERENCE COPY

A permanent chairman has not yet been selected, but indications are that efforts will be made to get a man familiar with the aircraft manufacturing industry to take the job.

Airline Helicopter Tests Planned

One-third of the money requested for prototype testing during fiscal 1952 will be for simulated airline operation of helicopters, and a local service airline may be singled out for the initial test program, it is learned.

In connection with these reports, observers attached significance to a recent speech by Undersecretary of Commerce D. W. Rentzel in which he said that experiments may soon begin using passenger helicopters over certain segments of local service routes, in addition to passenger shuttle operations in large metropolitan areas.

These experiments will be within the Prototype Aircraft Testing Program, for which Congress is being asked for funds. Involved in the simulated airline operation would be three 8-10 passenger helicopters of the type now being built for the military services. First operations are planned for this fall.

It's probable that the Washington, D. C., area will be the operations base so that military and civil government agencies will have first-hand opportunity to monitor the program. Some reports indicate that All American Airways may be selected for the initial helicopter operations.

CAA Asks \$205,200,000 for '52

A fiscal 1952 budget of \$205,200,000, including \$50,000,000 for liquidation of 1951 expenditures, has been asked by CAA. It is more than \$14,000,000 under 1951's total.

The new CAA budget is described as a "military budget" with emphasis placed on services that contribute directly to national defense. Funds for airport program are \$24,000,000, down \$15,700,000. There are no funds for air navigation development. This cut reflects emphasis on establishment of air navigation facilities, rather than development, with the '52 navigation facility budget increased \$3,650,000 to \$25,150,000.

MANUFACTURERS

J-65 in Canberra: The British Canberra, jet night intruder, to be built by The Glenn L. Martin Co., will be powered by the Wright J-65 Sapphire engine. The Canberra (Air Force B-57A) thus becomes second AF production plane to be powered by the new British licensed engine. Republic's F-84F is now flying at Muroc with a J-65.

American Aviation

News Issue



Vol. 14 No. 44

WAYNE W. PARRISH, Editor and Publisher
ERIC BRAMLEY, Executive Editor

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Price Ceiling on Parts: New price ceiling (CPR30) becomes effective May 28 for aircraft spare parts manufacturers, permitting them to raise prices by actual percentage increase in their wage and materials costs since start of Korean war. Base is the list price published for their products between Apr. 1 and June 24, 1950, or any of the three preceding quarters. Prices can't be hiked, however, without approval of Office of Price Stabilization. Resellers of aircraft parts still aren't covered by any order except January's general price freeze. Machine tool makers are trying to work out permitted price increases with OPS and will be covered by CPR30 unless agreement is reached by May 28.

1,000 Cessnas Ordered: Orders for over 1,000 more L-19's have been received by Cessna Aircraft Co. Previous contracts had totaled about 1,000.

Inventories Limited: Controlled Materials Plan regulations, which become effective July 1, restrict amount of copper and aluminum manufacturers may have on hand to supplies for following 60 days of operation. Steel inventories are limited to 45-day supply. New orders also establish rules for deliveries of these metals by warehouses, jobbers, dealers and retailers.

162,000 Workers: There are 162,000 workers currently engaged in aircraft production on Pacific coast with increase to 186,000 scheduled during next six months, according to Aircraft Industries Association survey. Los Angeles area has 108,835 workers, and will rise to 126,452 in six months.

\$50 Million Convair Credit: Consolidated Vultee Aircraft Corp. negotiated \$50 million three-year credit agreement with 10 banks to replace previous two-year \$20 million credit. New arrangement will cover all of company's known requirements.

P&W Subcontractors: About \$250,000,000 will be distributed by Pratt & Whitney Aircraft Division among its subcontractors this year. P&W has 5,285 companies on list, 90% of which are small businesses.

Delivery Times: Delivery schedules on main components of Lockheed's F-94 jet fighter: engines, 56 weeks; landing gear struts, 52; Zero readers, 47; bearings, 43; nuts, 30; gun mounts, 24. Buying of materials, parts and equipment reached post-war peak in March when Lockheed orders totaled about \$46,000,000. This year's orders will probably total about \$300,000,000, including subcontracting.

Hiller Expansion: Hiller Helicopters, now making 12 helicopters a month at Palo Alto, is expanding to increase production to four or five times that number. Sales this year will exceed \$10 million, with 1952 expected to be three or four times that amount. Company is selling \$2,500,000 of 5% convertible debentures through Blythe & Co. to finance expansion, retire bank loans and provide \$1,000,000 working capital.

DPA Loans: Piasecki Helicopter Corp. received \$4,500,000 loan for land, buildings, and equipment, under Sec. 302 of Defense Production Act, which provides 5% loans for defense construction on three to 20-year basis. Funds are disbursed by RFC as agent for DPA. Other loans: **Roller Bearing Co. of America** (anti-friction bearings used in landing gear struts), \$1,350,000 for land, construction of one building, acquisition of machinery; **Marman Products Co.** (aircraft clamps, couplings, fastenings), \$1,250,000 for land, one building and machinery; **Andrews-Alderfer Processing Co.** (inflation valves for life vests and rafts), \$250,000 for land, building and machinery; **Menasco Mfg. Co.** (landing gears), \$350,000 for new buildings.

Tax Write-Offs: Collins Radio Co. has been granted five-year tax write-off on \$777,382 new plant construction. Company, which will build radio equipment, had asked amortization of \$842,382. Aerojet Engineering Corp. was granted \$2,065,465 out of \$2,275,965 requested.

PLANES & EQUIPMENT

XF-92A Supersonic Program: New supersonic research program will be started at Muroc with delta-wing Convair XF-92A by Air Force and National Advisory Committee for Aeronautics. Plane's original Allison J-33-A-23 jet engine has been removed in favor of more powerful version of same engine, J-33-A-29, fitted with afterburner.

XC-99 Distance Payload Mark: Convair's XC-99 made 2,600-mile nonstop flight Sacramento-Savannah, Ga., carrying 85,000 lbs. of cargo. Air Force says it may also have carried 100,000 lbs. on shorter runs. Plane may have jet pods added extending design range (50 tons 2,000 miles) to 2,400 miles.

Flying Wing Returned: The YRB-49A, Northrop Aircraft's Flying Wing has been flown from Muroc to company's flight test base at Ontario, Calif., where it will remain until new program for it is evolved.

Big C-124 Load: Douglas C-124 Globemaster II flew on routine test mission from Edwards Air Force Base with maximum weight of 210,000 lbs., including 70,000-lb. payload. Air Force said this is heaviest load ever lifted by a production transport. Plane was designed for 1,000-mile operating radius with 50,000-lb. payload at gross weight of 175,000 lbs.

C-46 Tests End: Six-weeks test program on Curtiss-Wright C-56, aimed at determining to what extent plane meets transport category requirements of Civil Air Regulations, has been completed by CAA. Results have been turned over to CAB with certain recommendations regarding further action. Prior to start of tests, CAA officials indicated some thought was being given to requiring that C-46 be modified to meet T-category requirements. No comment on post-test attitude is available.

2-0-2 Directive: Additional airworthiness directives has been issued by CAA covering more modification items for Martin 2-0-2 and 2-0-2A. Items, and required completion dates, are: improvement in landing gear position indicating system to give more positive signals, and provision of system of windshield anti-icing, de-icing and de-fogging which is independent of wing heating system, Oct. 1, 1951; provision for supplying more heat to critical areas of wing for anti-icing, prior to Nov 1; redesign of heater fuel control box to provide adequate drainage, relocation of emergency high heat switches to eliminate lag (2-0-2's only), and redesign of fire detection circuit to eliminate stepping relay (2-0-2's only), by Jan. 1, 1952.

CONGRESS

NACA Funds Voted: House Armed Services subcommittee voted \$13,150,000 authorization for National Advisory Committee for Aeronautics' construction and equipment at Ames Laboratory, Moffett Field, Calif.; Edwards Air Force Base, Muroc, Calif.; Lewis Flight Propulsion Laboratory, Cleveland; Langley Aeronautical Laboratory, Langley Field, Va. Most of these funds were eliminated from NACA money bill when it passed House two weeks ago because Appropriations Committee members said authority for such a construction program was lacking (News Section, May 14).

MILITARY

ARDC to Baltimore: Air Force's Air Research and Development Command will have headquarters in Baltimore, Md. Personnel will be temporarily located in the Sun Building until a permanent site is selected.

New Directorate: Air Force's Maintenance Engineering Division has been raised to directorate level, an

upgrading that will have considerable influence on long-range policies. Director is Col. Walter W. Wise, former chief of the Division; Col. Victor L. Anderson is deputy director.

Training Bids Closed: Bids for operation of Air Force contract training schools were closed May 10. Bids are being evaluated and contract awards will be announced shortly, possibly by May 28.

Marine Helicopter Base: Marine Corps has commissioned its new helicopter base on part of former Naval Air Station at Santa Ana, Calif. Ultimate \$2,500,000 expansion program will convert base into major training facility.



CIVIL AERONAUTICS BOARD

PAA Gets Guatemala-LA: In a decision reached over a year ago but just approved by President Truman, CAB awarded Pan American World Airways three-year certificate for Guatemala City-Los Angeles route. Award becomes effective 60 days from May 7 and permits direct non-stop flights between Los Angeles and other cities beyond Guatemala City on PAA's routes. Decision was reached by CAB on Apr. 12, 1950. Three of five members who voted for it are no longer with Board—Chairman Joseph J. O'Connell, Jr., Russell B. Adams and Harold Jones.

BNF Asks New York: Exemption permitting immediate inauguration of service between Havana, Washington and New York has been requested by Braniff Airways. Route would link BNF's Latin American route with northeast U. S. and "permit effective competition for Pan American" as prescribed by 1946 Presidential mandate, it said. BNF charged that National will not cooperate at Havana and Eastern is chiefly interested in interchange with Pan Am. To add permanency to proposed route, BNF asked expeditious action on two year old Havana-New York certificate application.

Argosy Censured: CAB granted "temporary relief" to Youth Argosy to allow transportation to Europe of about 1,000 members of the group during period May 15-Sept. 30, but said they could use only U. S. and foreign scheduled airlines at lawfully-filed charter rates. Persons transported are those signed up with Argosy before Mar. 23, 1951. CAB "strongly censured" Argosy for "unauthorized solicitation and sales," claimed group acted in an "unwarranted manner" and indicated its decision was based largely on the "plight of the passengers."

Actions

- Associated Air Transport, Teterboro, N. J., granted two year exemption to continue operations as a large irregular carrier. AAT operated only 17 flights in 1950 and CAB concluded its services were "substantially irregular."
- Stewart Air Service granted exemption until Aug. 1, 1951, for operation of one weekly round-trip flight with Douglas DC-3 aircraft between Los Angeles and Las Cruces, Lower California, Mexico, pursuant to contract with The Sportsman's Travel Club, Inc.
- Aerovias Sud Americana denied individual exemption for large irregular carrier operations but service may continue until 60 days after decision in Latin America Airfreight Case.
- U. S. Consul in Montreal, Canada, commissioned to take depositions of 13 Canadian residents in connection with CAB investigation of Colonial Airlines and several of its officers.

Applications and Petitions

- United Air Lines and Trans World Airlines joined American and Eastern in objecting officially to CAB's recent proposal to establish an "interim" 42c ton-mile rate for "Big Four" airlines.

Examiners Reports

- "AREA" Aerovias Ecuatorianas, C.A. recommended by Examiner Curtis C. Henderson for foreign permit authorizing carriage of persons, property and mail between Quito or

Guayaquil, Ecuador, and Miami with intermediate service to Panama.

CAB Calendar

June 4—Hearing in Big Four Mail Rate Proceeding and Efficiency Investigation. Washington. (Docket 2849 et al.)

June 4—Hearing in Investigation of Colonial Airlines and its Officers. New York City. (Docket 4907).



AIRLINES

C&S Opposes Family Plan: Chicago and Southern Air Lines asked CAB not to extend the half-fare family plan beyond June 30. C&S, together with Braniff Airways and Pioneer Air Lines, are against the extension but all three will participate if CAB permits another year's trial. Other airlines are filing for extension.

PAA-Grace Deadlock: Pan-American-Grace Airway's directors, four from Pan American World Airways and four from W. R. Grace & Co., split 4-4 on election vote for president of Panagra. Grace interests had nominated **Andrew B. Shea**, who has been Panagra president; PAA proposed **Wilbur L. Morrison**, vice president in charge of Latin American Division. Grace interests said the vote means that Shea remains as president under Delaware corporate law until a successor can be elected. Meanwhile, CAB extended from May 14 to May 31 deadline for filing exceptions to its tentative decision approving a Panagra-National interchange between U. S. and Latin America.

NAL Denies 2-0-2 Purchase: National Airlines has denied reports that it has purchased Northwest Airlines' Martin 2-0-2's.

Wants Interchange Action: CAB said it was giving Chicago and Southern Air Lines and TWA two weeks to decide whether to withdraw their proposed Houston-New York interchange or agree to expedited CAB action. C&S had asked indefinite postponement of procedural steps on the interchange application filed nine months ago, but CAB said its policy is to move promptly with such cases. Prehearing conference is scheduled for May 28. Meanwhile, early action was seen on proposed C&S-Pan American interchange between Chicago, Houston and Mexico City when CAB set prehearing for May 29. Application was filed Feb. 26, 1951.

New CAL Headquarters: Continental Air Lines is negotiating with City of Denver to lease land at Stapleton Airfield for construction of two hangars and office and shop buildings to serve as airline's permanent headquarters. Cost is estimated at \$2,000,000.

PAL Settlement Seen: Prospects for early settlement in dispute between Philippine government and private management of Philippine Air Lines were seen in reports from Manila. Col. **Andres Soriano**, whose resignation as president takes effect May 31, said "there is agreement on the roles of government and private enterprise with respect to Philippine Air Lines. The president (Elpidio Quirino) has given me full assurance that a contract will be drawn expressing and underscoring the principle of management's right to manage . . ." Col. Soriano and four executives of the airline resigned recently because of alleged "undue interference" in the functions of management by government members of the board of directors.

MCA's DC-3 Program: Mid-Continent Airlines is increasing seats in its DC-3's from 21 to 24 and is modernizing the 23 planes at cost of \$625,000. First converted plane has been put into service, four more are expected in 60 days and entire fleet will be completed by next spring. Work is being done at Twin Cities base.

Charge for Messages: Amendment has been proposed to Civil Air Regulation Part 612 to institute a system of charges for certain business messages sent via CAA communications. To be charged at rate of \$1 for each 20 words or portion thereof in text and signature would be: reservations messages originated by an

airline to secure space, messages on changes in aircraft operating schedules to become effective more than 72 hrs. after messages are filed, lost baggage messages.



CIVIL AVIATION

Armour to Civil Defense: Merrill Armour, assistant general manager and Washington counsel of Aircraft Owners and Pilots Association, has been named transportation specialist-air for Federal Civil Defense Agency. His duties are to see that air transportation is available in connection with civil defense emergencies. He will continue to serve as AOPA's Washington counsel.

Airport Managers to Meet: South-Eastern Airport Managers Association will hold semi-annual meeting May 25-26 at Hotel Goldsboro, Goldsboro, N. C. Association covers the six southeastern states.



LABOR

UAL 7% Raise: United Air Lines, without advance announcement, granted 7% raise to about 4,200 employees, adding about \$1,152,000 to company's annual payroll. Increase, arrived at in conference method, was based on job group classifications using company's current job evaluation program. For non-supervisory personnel, raises range from \$12.50 to \$35 per month, depending on salary level of classification, while supervisory personnel increases vary according to job group, salary and length of service. Increase, UAL said, is in accordance with Wage Stabilization Act and other government wage regulations.



FINANCIAL

Manufacturing

Bell Aircraft Corp. reported 1950 net profit of \$1,468,120 against \$204,142 net for 1949.

Curtiss-Wright Corp. first quarter net profit \$1,502,153 against \$1,546,620 net in same 1950 period.

Lear Inc., \$22,132 loss for 1950 against \$510,000 profit in 1949. Reason for loss was preproduction program to meet 1951 schedules.

Airlines' First Quarter Earnings

United Air Lines: \$1,371,834 profit on \$28,152,847 revenues, against \$1,993,681 loss on \$18,363,610 in same 1950 period.

TWA: \$150,068 profit against \$1,846,704 loss last year. Earnings computed on basis of temporary domestic and international mail rates in effect.

Western Air Lines: \$166,925 profit against \$37,707 loss last year. Revenues \$3,650,830, expenses \$3,267,940.

National Airlines: \$1,424,674 net. Period is third quarter of NAL's 1951 fiscal year. Net profit for nine months ended Mar. 31, 1951, was \$2,079,132.

Braniff Airways: \$443,111 net against \$180,000 loss in 1950.

The Flying Tiger Line: \$96,905 net. Period is third quarter of fiscal year and profit for nine months ended Mar. 31, 1951 was \$839,826.



AROUND THE WORLD

French Line Buys Comets: Compagnie Maritime des Chargeurs Reunis, French airline, has bought two de Havilland Comet jet transports with Ghost engines for medium-range operations. Manufacturer says that four airlines have ordered 23 Comets. Deal with Panair do Brasil has been firmed up, it states, and airline will take planes with Rolls Royce Avon engines for longer-range operations.



COMING UP

May 22—AIA Public Relations Advisory Council, Washington, D. C.

May 23-25—Institute of Radio Engineers Technical Conference on airborne electronics, Biltmore Hotel, Dayton, Ohio.

May 25—AIA board of directors meeting, Washington, D. C.

International

May 22—ICAO Council, 13th session, Montreal.

June 5—5th Session, International Civil Aviation Organization, Montreal.